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BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

Implementing The Small Business Innovation Development Act--The First 2 Years

COMPLETED

The 1982 act seeks to encourage innovation and small business participation in federal research. Among other requirements, agencies spending more than $100 million annually for external research must award portions of their external research dollars to small businesses.

This first of several anticipated GAO reports in response to the act's reporting mandate focuses on implementation actions taken between 1982-84. Most of the agencies with direct involvement have made substantial efforts; the Office of Science and Technology Policy, however, has purposely limited its program monitoring and reporting activities. GAO recommends changes so that funding data and other information needed to properly determine agencies' compliance with the act is obtained.

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OCTOBER 25, 1985

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

This is our first report on the Small Business Innovation Development Act of 1982, which seeks to encourage innovation by requiring federal agencies to award portions of their external research budgets to small businesses. The act requires GAO to report to the Congress on the nature of research conducted under the act and agencies' efforts to implement the program. The report responds to that requirement and it assesses agencies' fundamental implementation activities during the first 2 years that the act has been in effect.

We are sending copies of the report to the Director, Office of Management and Budget, the heads of agencies subject to the act, and other interested parties. We will also make copies available to others upon request.

Charles A. Bowsher

Charles A. Bowsher
Comptroller General
of the United States

Federal agencies spend about $40 billion annually on research. The Small Business Innovation Development Act of 1982 seeks to encourage innovation primarily by requiring federal agencies to award portions of their research funds to small businesses through special Small Business Innovation Research (SBIR) procurement programs.

The law directs GAO to report to the Congress by 1987 on agency implementation efforts and the nature of research conducted. This first of several anticipated reports responding to that mandate addresses implementation of the act's fundamental requirements: the extent to which

--agencies established, funded, and provided accurate information on those activities required by the law and

--the Small Business Administration (SBA) and the Office of Science and Technology Policy (OSTP) carried out program coordination, monitoring, and congressional reporting duties.

BACKGROUND

The act requires each federal agency that spends more than $100 million annually on research performed by outside parties (extramural research) to establish an SBIR program open only to small businesses. Agencies must spend specified percentages (from 0.1 percent to 1.25 percent) of such extramural funds on these programs. To ensure that agencies do not shift funds from already established small business research efforts to their SBIR programs, each agency (including those with SBIR programs) with total annual research funding exceeding $20 million must establish annual non-SBIR research funding goals for small businesses. Each agency's non-SBIR goal must equal or exceed the percentage of its research funds awarded to small businesses during the preceding year.

SBA and OSTP share responsibility for monitoring and reporting annually to the Congress on agencies' SBIR programs. Accordingly, agencies must report data annually to SBA and OSTP. While not specified in the act, the legislative history indicates the Congress' desire that OSTP ensure the quality of SBIR research and that SBA protect the interests of small businesses.

RESULTS IN BRIEF

Agencies have, for the most part, established, funded, and reported data on SBIR programs and non-SBIR goals. However, most agencies have not reported the actual research obligation figures needed to judge compliance with the act and would have difficulty doing so within current reporting deadlines.

SBA has actively pursued and fulfilled its assigned responsibilities. OSTP, however, has purposely limited its program monitoring and reporting activities for various reasons, including to avoid duplicating SBA's activities.

PRINCIPAL FINDINGS

SBIR Programs

Through fiscal year 1984, 11 of 12 agencies meeting the extramural funding criterion established SBIR programs. Together the 11 agencies had issued 26 SBIR solicitations, received over 17,000 proposed projects, and made almost 2,100 SBIR awards totaling $156 million. (See pp. 3-4, 7-9, and app. I.)

The act requires that compliance with SBIR funding percentages be determined using actual extramural obligations (binding spending commitments). Most agencies, however, have reported extramural figures to SBA reflecting appropriations (obligation authority) or estimated obligations because such figures were more readily available. Most agencies said that they could not report the proper figures to SBA by the end of December (the annual due date required by SBA) because doing so would require extra work for budget personnel who are already busy at this time of year finalizing agencies' budget submissions to the Office of Management and Budget (OMB). However, most agencies said that they could report actual extramural obligations by early March--the normal date for reporting these and other research funding data to the National Science Foundation (NSF). (See pp. 11-20.)

On the basis of actual extramural obligations that agencies later reported to NSF, GAO determined that most agencies either met or came very close to their required SBIR percentages in fiscal years 1983 and 1984. (See pp. 20-21.)

Non-SBIR Goals

Most of the 18 agencies required to have non-SBIR goals collected and reported fiscal year 1983 and fiscal year 1984 goals data to SBA. However, in both fiscal years most agencies did not provide SBA with all the data needed to properly determine goal attainment. While the quality of data improved in fiscal year 1984, the amount of total research dollars (the legislatively required basis for computing goals) that agencies reported to SBA differed from that reported in the President's budget. Agencies cited that they do not normally finalize figures in the budget until after SBA's December reporting deadline as one reason for the inconsistency. (See pp. 32-37.)

The Department of Housing and Urban Development met the criterion requiring non-SBIR goals in fiscal year 1983 but not in fiscal year 1984. As a result, the Department did not submit a 1984 annual report to SBA, and neither the act nor its legislative history is clear as to whether the Department must continue to set goals because the act does not specify whether agencies must meet the criterion each year or only once. (See pp. 41-42.)

SBA and OSTP Responsibilities

SBA actions under the act through fiscal year 1984 have included issuing policy guidance to participating agencies, publicizing the program to small businesses, coordinating the release of agencies' solicitations, and monitoring and reporting to the Congress on the agencies' efforts. OSTP has monitored agency implementation and reported to Congress as required by the act. However, OSTP has not assessed the quality of research as envisioned by the reports of the House and Senate Small Business Committees. (See pp. 49-58.)

RECOMMENDATIONS

GAO recommends that:

--When the act is up for reauthorization, the Congress resolve the ambiguity about whether the $20 million research budget threshold for setting goals is a one-time or annual criterion by clearly making it an annual criterion.

--SBA alter deadlines so that agencies can more easily report the actual research obligation data needed to determine attainment of SBIR percentages and non-SBIR goals.

--Agencies with SBIR programs report actual extramural research obligations to SBA.

--Agencies that have reported inconsistent non-SBIR goal data to SBA and OMB reconcile the data and, to establish a correct base for future year goals, revise where necessary total research obligation dollars reported to SBA and the Congress.

--OSTP include the quality of research in its monitoring efforts.

GAO also recommends actions to, among other things, resolve uncertainty as to the specific activities that should be counted as extramural research. GAO's complete recommendations appear on pages 30, 44-45, and 59.

AGENCY COMMENTS

Most of the 21 agencies involved in implementing the act agreed with GAO's findings and recommendations. SBA generally concurred with GAO's administrative recommendations to it, but OSTP did not agree that it should monitor the quality of research. GAO continues to believe that the Congress intended OSTP to perform such an oversight role. (See p. 59.) Several other agencies also took issue with certain of GAO's proposed recommendations. Agencies' comments and GAO's responses appear on pages 31, 45-48, 59, and in appendices IV - XXIV.

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ABBREVIATIONS

AID	Agency for International Development
DESAT	Defense Small Business Advanced Technology Program
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
ED	Department of Education
EPA	Environmental Protection Agency
FCCSER	Federal Coordinating Council for Science, Engineering and Research
FCCSET	Federal Coordinating Council for Science, Engineering and Technology
FY	fiscal year

GAO	General Accounting Office
HCFA	Health Care Financing Administration
HHS	Department of Health and Human Services
HUD	Department of Housing and Urban Development
NASA	National Aeronautics and Space Administration
NRC	Nuclear Regulatory Commission
NSF	National Science Foundation
OHDS	Office of Human Development Services
OIRT	Office of Innovation, Research and Technology
OMB	Office of Management and Budget
OSTP	Office of Science and Technology Policy
PHS	Public Health Service
R&D	research and development
RDT&E	Research, Development, Testing and Evaluation
SBA	Small Business Administration
SBIR	small business innovation research
SI	Smithsonian Institution
TVA	Tennessee Valley Authority
USDA	United States Department of Agriculture
VA	Veterans Administration

CHAPTER 1

INTRODUCTION

The small business sector's role in innovation and the nation's economic growth has been a subject of congressional interest in recent years. The Small Business Innovation Development Act of 1982 (Public Law 97-219) was one highly visible result of that attention.

Based on the premise that the small business sector is a principal source of technological innovation, the act seeks to increase small business participation in federal research and development (R&D), primarily by requiring major federal research agencies to establish special small business innovation research (SBIR) procurement programs and by mandating that they devote specified proportions of their external research dollars to such programs. While the Small Business Administration (SBA) has prescribed a number of specific criteria to define "small business," in general, such businesses are for-profit firms with 500 or fewer employees.

The SBIR programs prescribed by the 1982 act were modeled after a program of the same name that the National Science Foundation (NSF) established in 1977 in response to a congressional requirement that it spend 10 percent of its applied research budget on high-quality research performed by small companies. (In 1977, this amount equated to about 1 percent of NSF's total budget.) In fiscal year 1982, the Department of Defense (DOD) voluntarily established a similar program, the Defense Small Business Advanced Technology (DESAT) program.

The merits of the 1982 act were debated extensively in the Congress. The debate covered a number of issues, concentrating heavily on mandatory funding. Proponents, claiming that federal R&D procurement systems favored large firms and universities, argued that funding guarantees were needed to ensure that the small business sector received an appropriate share of the federal R&D dollar--a share commensurate with its innovation capabilities. Opponents questioned whether other means of increasing small business participation might be more appropriate. Predicting that existing funds for basic research would be most vulnerable, opponents expressed particular concern that mandatory SBIR funding would put additional pressure on what they viewed as already strained basic research budgets.

MAJOR PROVISIONS OF THE ACT

The act's stated purposes are to

--stimulate technological innovation,

--use small business to meet federal research and development needs,

--foster and encourage minority and disadvantaged persons to participate in technological innovation, and

--increase private-sector commercialization of innovations derived from federal research and development.

Among other things, the act requires that each federal agency having an annual extramural (external) R&D budget exceeding $100 million spend specified percentages (up to 1.25 percent) of such budget via a special SBIR program.[1] The act mandates a three-phase approach for these programs: an initial phase to demonstrate the feasibility of a proposed project; a second phase to carry out the most promising phase I projects; and a third phase to pursue commercial application of resulting technologies through nonfederal funds or, if appropriate, through traditional (non-SBIR) federal agency procurement programs.

SBIR projects must be performed under funding agreements (either contract, grant, or cooperative agreement) between a small firm and a federal agency. The Small Business Administration advises agencies to normally limit phase I funding agreements to 6 months and $50,000 and phase II agreements to 2 years and $500,000.

Agencies must conduct SBIR programs in accordance with policy direction issued by SBA in consultation with the Office of Science and Technology Policy (OSTP), the Office of Management and Budget (OMB), and the Office of Federal Procurement Policy. Among other statutory criteria, the direction is to provide for simple and timely SBIR programs that minimize the regulatory burden on participating small firms. The act also assigns participating agencies numerous unilateral responsibilities, such as determining SBIR research topics, soliciting and evaluating project proposals, selecting awardees, and administering funding agreements. (Agencies' compliance with the statutory and regulatory SBIR program requirements is discussed in ch. 2; the extent to which SBA's policy direction complies with statutory requirements is included in ch. 4.)

In addition to special SBIR programs, the act requires any federal agency with a total annual R&D budget (rather than the extramural R&D budget criterion for SBIR programs) exceeding $20 million to establish specific, annual goals for non-SBIR R&D funding agreements with small businesses. The act requires that these non-SBIR goals be equal to or greater than the percentage of the agency's R&D budget expended under funding agreements with small businesses in the immediately preceding fiscal year. (Ch. 3 discusses agencies' compliance with this requirement.)

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[1] As explained in chapter 2, the act excludes intelligence agencies, certain Department of Energy nuclear defense programs, and some Agency for International Development support of foreign research. As also discussed in chapter 2, the precise definition of and basis for calculating extramural R&D budgets have been the subject of considerable confusion among participating agencies and the root of certain disagreements, not all of which have been resolved.

The act assigns certain program coordination and/or oversight functions to SBA and OSTP beyond their previously discussed policy duties. SBA and OSTP are charged with similar responsibilities for surveying and monitoring the implementation or operation of participating agencies' SBIR programs and for reporting the results at least annually to the House and Senate Committees on Small Business. (Ch. 4 discusses the extent of the agencies' compliance with these and other program-coordination requirements.)

Finally, the act requires that the Comptroller General of the United States report to the Congress within 5 years of enactment (by July 22, 1987) on the implementation of the act and on the nature of research conducted under it. Unless the Congress acts to reauthorize it, the Small Business Innovation Development Act of 1982 is automatically repealed effective October 1, 1988.

SCOPE OF ACTIVITIES UNDER THE ACT

A total of 12 federal agencies conducted SBIR programs, requiring that specified percentages of R&D funds be allocated to small businesses during fiscal year 1985, the third year during which the act's mandatory SBIR program provisions applied. These agencies were:

1. The Department of Agriculture (USDA)
2. The Department of Commerce (DOC)
3. The Department of Defense (DOD)
4. The Department of Education (ED)
5. The Department of Energy (DOE)
6. The Department of Health and Human Services (HHS)
7. The Department of the Interior (DOI)
8. The Department of Transportation (DOT)
9. The Environmental Protection Agency (EPA)
10. The National Aeronautics and Space Administration (NASA)
11. The National Science Foundation (NSF)
12. The Nuclear Regulatory Commission (NRC)

With the exception of Commerce, these agencies also conducted SBIR programs in fiscal years 1983 and 1984. According to SBA, a total of 18 agencies met the criterion requiring non-SBIR goal-setting during fiscal years 1983 and 1984 (the latest years for which data are available). These consisted of the above 12 agencies with SBIR programs plus the Department of Justice (DOJ), the Department of Housing and Urban Development (HUD), the Agency for International Development (AID), the Smithsonian Institution (SI), the Tennessee Valley Authority (TVA), and the Veterans Administration (VA).

During fiscal years 1983 and 1984 (the most recent for which complete data are available), agencies with SBIR programs issued 26 SBIR solicitations and received about 17,000 total proposals. The agencies awarded a total of 2,097 SBIR funding agreements during the period--1,685 phase I awards and 412 phase II awards.

SBIR awards for the two years totaled about $156 million--about $44.5 million in fiscal year 1983 and about $111.5 million fiscal year 1984. (SBA estimates that SBIR awards will grow to about $500 million annually by the time the current act expires at the end of fiscal year 1988.) SBIR awards, however, accounted for about 6 percent of the approximately $2.5 billion in R&D funds that agencies subject to the act awarded to small businesses during fiscal years 1983 and 1984. Overall, about 3 percent of the agencies' total R&D funds went to small businesses during the 2-year period.

The diversity of SBIR programs is illustrated by the number and wide range of topics covered. Agencies solicited SBIR proposals under more than 600 separate research topics during fiscal year 1983 and more than 1,600 topics in fiscal year 1984, which SBA classified into the following 7 technology areas:

--Computer, Information Processing, Analysis

--Electronics

--Life Sciences

--Materials

--Mechanical Performance of Vehicles, Weapons, Facilities

--Energy Conversion and Use

--Environment and Natural Resources

OBJECTIVES, SCOPE, AND METHODOLOGY

The Small Business Innovation Development Act, as noted previously, requires that GAO report to the Congress on the act's implementation within 5 years of enactment--i.e., by July 22, 1987. Our report is also to address the nature of research that has been conducted under the act and is to include the judgments of the heads of participating departments and agencies as to the effect of the act on research programs. This is the first of several reports that we expect to issue in response to this requirement.

Because of the breadth of the act and our reporting mandate, we decided to divide our work into several segments, each addressing an important program aspect or issue. When assembled together, we expect these components to provide a comprehensive assessment of the act's implementation. We plan to issue reports on each of these segments as they are completed and to draw these together into a final overall summary report that fully addresses our legislatively prescribed reporting criteria.

This first report covers fundamental implementation efforts during fiscal years 1983 and 1984--the first 2 years during which the act has been in effect. Our objectives in this report are to assess

--the extent to which agencies have established SBIR programs, complied with the act's funding requirements, and followed SBA's related policy directives and procedures (see ch. 2);

--the extent to which agencies have complied with legislative and SBA policy requirements for establishing and reporting information on non-SBIR, small business funding goals (see ch. 3); and

--the extent to which SBA and OSTP have implemented their program coordination, oversight, and reporting functions (see ch. 4).

While we obtained data on agencies' SBIR awards, we did not review the agencies' procedures for making the awards. We expect to cover this aspect of program implementation as well as other required reporting topics in subsequent reviews.

In this review we included all federal agencies that SBA identified as meeting the legislative criterion requiring SBIR programs and/or non-SBIR goals in either fiscal year 1983 or fiscal year 1984 (the previously identified 18 agencies). While we reviewed SBA's procedures for identifying these agencies, we did not independently verify the accuracy of the data that SBA used. We also included in this assignment all other agencies and organizations to which the act assigns responsibilities or duties--SBA, OSTP, OMB, and the Office of Federal Procurement Policy. In all, we obtained information from or contacted 22 federal agencies/offices involved in implementing the act.

We obtained information on these agencies' implementation efforts through interviews with cognizant agency officials and review of pertinent documents, including the agencies' required annual program reports, agency legal decisions, and relevant agency correspondence. We conducted interviews (either in person or by telephone) with each research agency official(s) designated to administer its SBIR program and/or non-SBIR goal activities. Where necessary we also contacted appropriate budget officials in the research agencies. We also interviewed officials in charge of administering SBA's and OSTP's responsibilities under the act.

We did not independently verify the accuracy of information that agencies provided to us, but we otherwise conducted our work in accordance with generally accepted government auditing standards. We did, however, compare certain budgetary data that the agencies reported to SBA to similar data reported in other federal sources; where obvious differences existed, we asked the agencies to explain and reconcile them. We performed our audit work from April 1984 to March 1985, almost exclusively at the agencies' headquarters offices, located in Washington, D.C., and vicinity.

CHAPTER 2

SMALL BUSINESS INNOVATION RESEARCH PROGRAMS

With one exception,[2] each agency that SBA identified as having an extramural R&D budget exceeding $100 million in fiscal year 1983 and/or fiscal year 1984 established an SBIR program, as required by the act. With minor technical exceptions, all participating agencies carried out their prescribed SBIR program responsibilities in accordance with the act and SBA's program guidance. In most cases, however, the agencies reported to SBA extramural budget figures that were based on either appropriations or estimated obligations rather than on actual obligations--which we believe are required to determine compliance with the act's SBIR funding provisions. The best data available to us were actual fiscal years 1983 and 1984 extramural obligations that the agencies reported to NSF (or in a few cases to SBA). On the basis of those data, we found that 4 of the 11 participating agencies in fiscal year 1983 and 8 of 11 agencies in fiscal year 1984 met or exceeded their legislatively required SBIR funding percentages. Nearly all the remaining agencies, however, were within 6 one-hundredths of the required percentages.

The extramural budget figures that the Departments of Defense and Transportation reported to SBA are the subject of continuing disagreement between the agencies and SBA. In both instances, SBA's estimates of the agencies' extramural budgets (and the resulting amounts that the agencies must expend on SBIR awards to comply with the act) have far exceeded the agencies' estimates. For DOD, the disagreement involves about $2 billion and centers on whether DOD's fiscal year 1984 extramural R&D budget should include a certain category of funds under DOD's Research, Development, Testing and Evaluation appropriations. The SBA-DOT disagreement involves more than $100 million and resulted primarily because DOT reported extramural research amounts to NSF in both fiscal year 1983 and fiscal year 1984 that it excluded from extramural research figures reported to SBA for purposes of the SBIR program act.

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[2] The Department of Commerce did not establish an SBIR program in fiscal year 1984 because it initially estimated that its extramural research budget would not exceed $100 million. Commerce, however, established a program in fiscal year 1985 and plans to make up SBIR awards that it should have made during fiscal year 1984. (See app. I.)

AGENCY SBIR PROGRAMS GENERALLY FOLLOW ACT'S REQUIREMENTS

The act requires that each federal agency[3] with an extramural budget for research in excess of $100 million for fiscal year 1982 or any fiscal year thereafter spend specified percentages of its budget in fiscal year 1983 (or in such subsequent fiscal year that the agency has such a budget) with small businesses through an SBIR program.[4] The act defines "extramural budget" as the sum of the total research obligations minus amounts obligated for such activities by employees of the agency in or through government-owned, government-operated facilities.

Before and during each fiscal year, SBA--as part of its oversight role--identifies agencies whose annual estimated extramural research obligations exceed the $100 million minimum, based on an annual NSF survey of the expenditure of federal research funds. SBA uses the NSF survey because it is the only source that identifies both agencies' extramural and total research obligations. Agencies also report their actual total (but do not identify extramural) research obligations for the fiscal year to OMB for inclusion in the President's budget. Agencies are to use the same definition of research in preparing both the NSF and OMB reports. According to NSF, total research obligations reported in its survey should reconcile with those reported to OMB. The definitions of extramural and research that agencies use in preparing annual survey data are consistent with the definitions of extramural budget and research contained in the SBIR program act.

SBA identified the following agencies as meeting the criterion requiring establishment of an SBIR program in fiscal years 1983 and 1984.

--Department of Agriculture

--Department of Defense

--Department of Education

--Department of Energy

--Department of Health and Human Services

--Department of the Interior

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[3] For the purposes of the act, the term "federal agency" does not include any agency within the "intelligence community."

[4] The act authorizes the Department of Energy to exclude amounts appropriated for atomic energy defense programs and the Agency for International Development to exclude certain specified foreign research funds.

--Department of Transportation

--Environmental Protection Agency

--National Aeronautics and Space Administration

--National Science Foundation

--Nuclear Regulatory Commission

--Department of Commerce (fiscal year 1984 only)

Legislative requirements for SBIR participating agencies

Under the act each agency that is required to establish an SBIR program shall among other things (1) issue SBIR solicitations that detail categories of projects to be addressed by the small businesses in SBIR proposals, (2) receive and evaluate SBIR proposals, (3) select awardees, and (4) report annually on its SBIR program to SBA and the Office of Science and Technology Policy (OSTP).

The act further requires that agencies make SBIR awards in a uniform, three-phase process. Phase I awards are for determining the scientific and technical merit and feasibility of ideas submitted pursuant to an SBIR solicitation (generally limited to 6-month performance periods and \$50,000). Phase II awards are made only for phase I projects that the agencies judge to be deserving and are for further developing the proposed ideas to meet particular program needs. These awards are generally limited to 2-year performance periods and \$500,000. Both phase I and II awards are funded with SBIR program monies. In phase III, firms pursue commercial applications of the research (conducted under phases I and II) from other funding sources--either nonfederal sources or, if appropriate, production contracts with a federal agency.

Appendix I summarizes the extent of actions taken by agencies during fiscal years 1983 and 1984 in response to their primary responsibilities.

SBA policy directives for SBIR

The act requires that each participating federal agency conduct its SBIR program in accordance with certain specified requirements and implementing policy directives issued by SBA. Major requirements in SBA's implementing policy directives[5] are that each SBIR agency (1) provide SBA with certain specified information to be included in SBA's quarterly pre-solicitation announcements, (2) issue solicitations in accordance with schedules coordinated with SBA, (3) issue "simplified, standardized" solicitations in accordance with prescribed guidance, and (4) submit "simplified, standardized and timely" annual reports to SBA.[6]

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[5] SBA issued an initial policy directive in November 1982 and published revised versions in August 1983 and September 1984.

Pre-solicitation announcement information, solicitation timing and contents

In order to inform small businesses of forthcoming agency SBIR solicitations, SBA publishes pre-solicitation announcements in September, December, March, and June of each fiscal year. These announcements contain information on those agency SBIR solicitations that are scheduled for release during the following 3-month period. SBA's policy directive requires agencies to submit the following information to SBA to be included in the announcement: (1) a list of research topics that the solicitation will cover, (2) an agency address and/or the telephone number from which interested parties can obtain the SBIR solicitation or additional information, (3) the release date for the solicitation, (4) the date that proposals are due, and (5) the estimated number and average dollar amount of phase I awards that the agency expects to make under the solicitation.

We found that, with minor exceptions, the 11 participating agencies provided SBA with required pre-solicitation announcement information in both fiscal years 1983 and 1984. DOD, the one exception, did not provide information on the estimated number and dollar value of phase I SBIR awards in either year. According to DOD's SBIR program representative, DOD chooses not to estimate the number and dollar value of phase I awards because they may vary from the actual awards. (This is because DOD's phase I awards are dependent upon factors such as the number of phase II SBIR awards and continued funding of phase II awards under its previous DESAT program.) Another exception involved HHS, which did not provide pre-solicitation announcement information on one of its four fiscal year 1984 SBIR solicitations.

Most agencies' solicitations were released on time, following a master release schedule of dates contained in each SBA pre-solicitation announcement.

SBA's policy directive also requires that agencies prepare SBIR program solicitations in a simplified, standardized, easily read, easily understood format. To guide solicitation preparation, the directive specifies certain required information under the following required sections:

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[6] The policy directive also requires agencies to establish a simplified, standardized funding process; we plan to address this aspect of agencies' SBIR programs in a future report.

1. Program Description

2. Definitions

3. Proposal Preparation Instructions and Requirements

4. Method of Selection and Evaluation Criteria

5. Considerations

6. Submission of Proposals

7. Scientific and Technical Information Sources

8. Research Topics

Appendix II summarizes the agencies' adherence to SBA's information requirements. Each agency met a majority of SBA's overall solicitation information requirements in both fiscal year 1983 and fiscal year 1984.

Agency reports to SBA

In accordance with the act, SBA's policy directive requires that agencies participating in the SBIR program submit annual reports to SBA covering program activities for the fiscal year. The reports are due to SBA within 90 days of the close of the fiscal year (i.e., by late December). In order to collect uniform information, SBA provides the agencies with a recommended reporting form. Appendix III summarizes the information that SBA requested agencies to report on their fiscal year 1983 and fiscal year 1984 SBIR programs. With very minor technical exceptions, all agencies complied with the reporting requirements.

AGENCIES' BUDGET DEFINITION CLOUDS DETERMINATION OF COMPLIANCE WITH FUNDING REQUIREMENTS

The act requires federal agencies having annual extramural (external) research budgets exceeding $100 million to spend specified percentages of such budgets with small businesses through SBIR programs. On the basis of the act's definition of "extramural budget," we believe that compliance with this provision must be judged in terms of actual obligations--i.e., the amount that an agency actually obligates (binds itself to spend) through its SBIR program, expressed as a percentage of its actual extramural research obligations.

Most participating agencies thus far have interpreted budget to mean either appropriations (new obligational authority) or estimated obligations and have used these as bases for reporting their extramural R&D "budgets" and required SBIR funding amounts to SBA. In many cases the extramural budget amounts that agencies reported to SBA for purposes of the act were lower than the actual extramural obligation amounts that they reported several months later to NSF.

On the basis of the best data available at the time of our audit work--actual fiscal years 1983 and 1984 extramural obligations reported to NSF (or in a few cases to SBA)--we determined that 4 of the 11 participating agencies in fiscal year 1983 and 8 participating agencies in fiscal year 1984 met or exceeded their legislatively required SBIR funding percentages. Most remaining agencies, however, were within 6 one-hundredths of their required percentages.

Legislative requirements for SBIR program funding

The percentages that the act requires agencies to spend on SBIR programs are as follows:

Table 2.1:
Percentages of Extramural R&D Budget Required for SBIR

	Agencies having extramural budgets in excess of $100 million	Agencies having extramural budgets in excess of $10 billion[a]
	--------------(percent)	------------
Fiscal year 1983 - or first year having such budget	0.2	0.1
- second year having such budget	0.6	0.3
- third year having such budget	1.0	0.5
- fourth year having such budget	1.25	1.0
- fifth year having such budget	1.25	1.25

[a] DOD is the only agency in this category thus far.

The act defines research (or R&D) as

> ". . . any activity which is (A) a systematic, intensive study directed toward greater knowledge or understanding of the subject studied; (B) a systematic study directed specifically toward applying new knowledge to meet a recognized need; or (C) a systematic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development,

> and improvement of prototypes and new processes to meet specific requirements."

This definition is essentially the same as that used by OMB in conjunction with the preparation of the President's budget and by NSF in conjunction with the preparation of the document entitled Federal Funds for Research and Development.[7] The act defines extramural budget as ". . . the sum of the total obligations minus amounts obligated for such activities by employees of the agency in or through Government-owned, Government-operated facilities. . .."

Based upon the act's definitions of "extramural budget" and "research," we interpret the act to mean that the specified percentage of an agency's SBIR awards made during a fiscal year must equal or exceed the specified percentage of the agency's actual extramural obligations for that fiscal year. By defining "extramural budget" as total obligations minus in-house obligations, we believe that the act clearly indicates that the SBIR requirements are to be based on actual obligations. In this context the phrase "expending" the required portion of the "extramural budget" means obligating the appropriate percentage of the extramural budget.

The act does not define the term "obligations"; however, GAO's A Glossary of Terms Used in the Federal Budget Process (March 1981) defines obligations incurred as "orders placed, contracts awarded, services received, and similar transactions during a given year that will require payment during the same or a future period." Hence, for purposes of the SBIR program, obligations would be the total dollar value of funding agreements awarded during the fiscal year.

Our definition of obligations is consistent with that used by OMB in conjunction with the President's budget and that used by NSF in its Federal Funds for Research and Development. Accordingly, we believe actual obligations to be the intended basis for computing agencies' extramural budgets and SBIR expenditures. Of course, the total amount of actual obligations incurred are not known until the end of the fiscal year.

Agencies' bases for reported extramural budget and SBIR amounts

Each SBIR agency's annual report to SBA must include the agency's determination of its extramural research budget for the reported fiscal year and the agency's total phase I and phase II dollars awarded for the reported fiscal year. As noted previously, both extramural budget and SBIR award figures should be based on the actual obligations incurred in the fiscal year.

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[7] In this document NSF publishes the results of its "Annual Survey of Federal Funds for R&D." The purpose of the survey is to measure federal support of and participation in national scientific activities.

The following table summarizes the fiscal year 1983 and fiscal year 1984 extramural research budget figures that agencies with SBIR programs reported to SBA and the agencies' bases for those figures according to agency officials. Note that almost all agencies used a basis other than actual obligations to compute their extramural budgets.

Table 2.2:
Bases of Extramural Budget Figures

Agency	Extramural budget reported by agency		Appropriations/ budget authority for		Estimated obligations reported to NSF		Actual obligations at end of	
	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84
	-------(000)----------							
USDA	$ 277,688	$ 270,200			X			X
DOD	16,011,000	15,848,000	X	X				
DOE	2,517,300	2,613,300	X	X				
ED	116,000	111,800			X	X		
HHS	3,318,342	3,760,162					X	X
DOI	103,000	114,890			X	X		
DOT	97,600	300,000	X			X		
EPA	118,500	142,700	X	X				
NASA	2,472,600	2,209,800	X	X				
NSF	926,700	1,088,350					X	X
NRC	190,800	173,000	X	X				
Total			6	5	3	3	2	3

As the preceding table indicates, about one-half of the 11 SBIR agencies based their extramural budget figures reported to SBA on appropriations. Appropriations represent new obligational authority and thus are upper limits on amounts that agencies may legally obligate (beyond amounts that may be obligated from any carryover balances) during the period of time specified in the respective appropriations acts. About half of the other agencies reported estimated obligations to SBA. These agencies reported estimated figures that they had reported previously to NSF for its annual survey of federal funds for R&D. In several instances the estimates were made between 13 and 18 months before the end of the fiscal year for which they were reported. Only NSF, HHS, and USDA based their fiscal year 1983 and/or fiscal year 1984 extramural budget figures reported to SBA on actual obligations for the fiscal year, as intended by the act.

The following tables compare the agencies' fiscal years 1983 and 1984 extramural budget figures reported to SBA (which were based on appropriations, estimated obligations, or actual obligations) with the agencies' actual fiscal years 1983 and 1984 extramural obligations as later reported to NSF in the annual survey of federal funds.[8]

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[8] The NSF survey shows actual obligations for the preceding fiscal year and estimated obligations for the current and forthcoming fiscal years. Actual fiscal year 1984 obligations were reported in the fiscal year 1985 survey. Although NSF normally requests that agencies respond to the annual survey by early March, NSF postponed the fiscal year 1985 response date until mid-April because printing problems made it late sending the survey to the agencies.

Table 2.3:

Comparison of Agency Extramural Budgets Reported to SBA and Actual Agency Extramural Obligations Reported to NSF

FY 1983

Agency	Actual extramural obligations reported to NSF	Extramural budget reported to SBA	Actual extramural obligations minus reported extramural budget reported to SBA	SBIR allocation[a] amount based on figures reported to NSF	SBIR allocation[b] amount based on figures reported to SBA	Differences in SBIR allocation amounts
			(000)			
USDA	$ 288,500	$ 277,688	$ 10,812	$ 577.0	$ 555.4	$ 21.6
DOD	14,932,800[c]	16,011,000	(1,078,200)	14,932.8	16,700.0	(1767.2)
DOE	2,618,605[d]	2,517,300[e]	101,305	5,237.2	5,040.0	197.2
ED	100,200	116,000	(15,800)	200.4	232.0	(31.6)
HHS	3,318,600	3,318,342	258	6,637.2	6,636.7	0.5
DOI	108,400	103,000	5,400	216.8	206.0	10.8
DOT	272,100	97,600	174,500	544.2	195.2	349.0
EPA	147,500	118,500	29,000	295.3	237.0	58.0
NASA	1,527,000[f]	2,472,600	(945,600)	4,945.2[g]	5,000.0	(54.8)
NSF	931,200	926,700	4,500	1,862.4	1,853.0	9.4
NRC	183,900	190,800	(6,900)	367.8	381.6	(13.8)

[a] Derived by applying statutory percentage to actual extramural obligations. Represents GAO's best estimate of amount agency required to award through SBIR program.

[b] Represents amount agency determined it must award through SBIR program.

[c] Represents actual extramural obligations reported to NSF ($16,592,000,000) minus a 10% deduction for intelligence R&D.

[d] Represents actual extramural obligations reported to NSF ($4,279,200,000) minus atomic energy defense programs ($1,660,595,000).

[e] Excludes atomic energy defense programs as permitted by the act.

[f] Reflects reclassification of space shuttle production/operation from NASA R&D appropriation to new appropriation, Space Flight Control and Data Communications.

[g] SBIR appropriated amount.

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Table 2.4:
Comparison of Agency Extramural Budgets Reported to SBA and Actual Agency Extramural Obligations Reported to NSF

FY 1984

Agency	Actual extramural obligations reported to NSF	Extramural budget reported to SBA	Actual extramural obligations minus reported extramural budget reported to SBA	SBIR allocation[a] amount based on figures reported to NSF	SBIR allocation[b] amount based on figures reported to SBA	Differences in SBIR allocation amounts
	(000)					
USDA	$ 277,600	$ 270,200	$ 7,400	$ 1,665.6	$ 1,621.2	$ 44.4
DOD	16,304,130[c]	15,848,000	456,130	48,912.4	42,790.0	6,122.4
DOE	2,537,200[d]	2,613,300[e]	(76,100)	15,223.2	15,826.0	(602.8)
ED	105,200	111,800	(6,600)	631.2	671.0	(39.8)
HHS	3,764,600	3,760,162	4,438	22,587.6	22,561.0	26.6
DOI	76,800	114,890	(38,090)	460.8	689.3	(228.5)
DOT	272,100	300,000	(27,900)	1,632.6	1,631.0	1.6
EPA	156,500	142,700	13,800	939.0	856.2	82.8
NASA	1,778,600	2,209,800[f]	(431,200)	10,671.6[g]	13,200.0	(2,528.4)
NSF	1,067,000	1,088,350	(21,350)	6,402.0	7,100.0	(698.0)
NRC	167,800	173,000	(5,200)	1,006.8	1,038.0	(31.2)

[a] Derived by applying statutory percentage to actual extramural obligations. Represents GAO's best estimate of amount agency required to award through SBIR program.

[b] Represents amount agency determined it must award through SBIR program.

[c] Represents actual extramural obligations reported to NSF minus a 10% deduction for intelligence R&D.

[d] Represents actual extramural obligations reported to NSF ($4,458,000,000) minus atomic energy defense programs ($1,920,800,000).

[e] Excludes atomic energy defense programs as permitted by the act.

[f] NASA included funds from certain appropriations that are not required to be included when reporting its extramural budget to SBA.

[g] SBIR appropriated amount.

As the tables show, 7 of the 11 agencies in fiscal year 1983 and 4 of the 11 agencies in fiscal year 1984 reported extramural budgets to SBA that were lower than the agencies' actual extramural obligations (as reported to NSF). Consequently, the amounts which these agencies reported to SBA as SBIR funding minimums (SBIR allocation amounts) are lower than they would have been if based on actual extramural obligations. Although USDA, HHS, and NSF said that their fiscal year 1983 and/or fiscal year 1984 extramural budgets reported to SBA represent actual extramural obligations, the figures differ from the actual extramural obligation figures reported to NSF. The reason for this difference most likely is that the agencies reported actual extramural obligations to NSF 3 to 8 months after they reported them to SBA; the NSF figures may therefore reflect subsequent modifications or adjustments.

Agencies' reasons for not using actual obligations

The agencies that reported extramural budgets based on appropriations or estimated obligations for the most part determined these amounts in the beginning of the fiscal year for planning purposes. All but one of the agencies that reported extramural budgets based on appropriations did so because they believed that appropriations would not vary significantly from actual obligations or would be higher than actual obligations. The remaining agency used appropriations because its general counsel interpreted the intent of the act as requiring the extramural budget to be based on the obligational authority detailed in the fiscal year's appropriation act.

Agencies may also have reported extramural research budgets based on appropriations because SBA's reporting form did not define "Extramural R&D Budget" and the August 1983 and September 1984 versions of SBA's policy directive called for current fiscal year ". . .extramural research and research and development total budget authority" (appropriations). This instruction is inconsistent with the act which requires that extramural obligations be used to determine agency compliance with the SBIR funding provision. It is also inconsistent with SBA's method of judging compliance with the act on the basis of actual extramural obligations the agencies report in the NSF annual survey of federal funds.

Most of the agencies that reported extramural budgets to SBA based on estimated obligations did so because they wanted their reported extramural budgets to be consistent with SBA's determination of their extramural budgets. SBA estimates the agencies' extramural budgets for the fiscal year at the time that agencies submit annual reports to SBA, based on the estimated extramural obligation figures agencies reported in the most recent NSF annual survey of federal funds.

We found that the fiscal years 1983 and 1984 agency extramural budgets based on appropriations or estimated obligations were sometimes higher and sometimes lower than the agencies' actual fiscal year 1983 extramural obligations reported to NSF. For instance, the DOD, NASA, and NRC fiscal year 1983 extramural budgets reported to SBA (which were based on appropriations) exceeded the agencies' actual extramural obligations reported to NSF by $6.9 million to $1,078 million. ED's fiscal year 1983 extramural budget reported to SBA (based on estimated extramural obligations reported to NSF) exceeded ED's actual extramural obligations reported to NSF by $15.8 million. On the other hand, the DOE, DOT, and EPA fiscal year 1983 extramural budgets reported to SBA (based on appropriations) were lower than the agencies' actual extramural obligations reported to NSF by $29 million to $174.5 million. The DOI and USDA fiscal year 1983 extramural budgets reported to SBA (based on estimated extramural obligations reported to NSF) were, respectively, $5.4 million and $10.8 million lower than their actual extramural obligations reported to NSF.

Actual obligations for a fiscal year can exceed the appropriated amount for the same fiscal year for certain appropriations--those having multiple-year and no-year authority. Such appropriations permit the amounts specified in the appropriation to remain available for obligation for a certain period of time in excess of one fiscal year. Therefore, obligations incurred in one fiscal year may be funded from both the current fiscal year's and previous fiscal year's appropriations.

As discussed previously, we believe that compliance with the act's SBIR funding provisions must be judged by whether agencies actually obligated the statutory percentage of their actual extramural R&D obligations for the fiscal year. We recognize that at the beginning of the fiscal year, agencies need to estimate their extramural budgets and required SBIR funding levels for planning purposes. Agencies can base their initial estimates on any figures that they believe are most appropriate--appropriations or estimated obligations. However, the agencies should recognize that these estimates will most likely differ from the actual extramural obligations for the fiscal year.

Most agencies informed us that it would be difficult if not impossible to report actual extramural research obligations in their annual reports to SBA, which are due at the end of December. Two agencies (Interior and NASA) said that they would need an entirely new accounting system to be able to report actual extramural obligations by that time. Several SBIR agencies emphasized that December is the busiest time of the year for their budget offices because they are in the process of preparing budget submissions to OMB. In conjunction with their budget submissions, the agencies prepare OMB exhibit 44, which details actual total (but not extramural) research obligations for the completed fiscal year. According to an OMB budget examiner, agencies often do not make final their research obligation figures until mid- or late January. Most agencies believed that it would take a significant amount of additional effort to identify the extramural portion of their actual total research obligations. However, nearly all the agencies believed that they could report actual extramural obligations to SBA by the first of March.

We believe that agencies could report actual extramural obligation data to SBA with little or no additional effort if SBA moved the due date for agencies extramural obligation data from the end of December to March 1. The reporting would coincide with the usual due date for agencies' data for the NSF annual survey of federal funds, in which they already report actual extramural research obligations for the most recently completed fiscal year.

It should be noted that delaying submission of this particular data element need not appreciably delay SBA's annual SBIR program report to the Congress. Agencies could continue reporting other SBIR program information used in the annual report by the end of December. (In ch. 3 we also recommend that SBA delay the due date for agencies' reporting of the relatively small amount of data required on non-SBIR research funding goals for small businesses. Such a delay would help agencies to report consistent funding figures to SBA and OMB.) SBA would thus have as much time as ever to prepare the majority of the report--a process that SBA now completes in late February.

Agencies' compliance with SBIR funding provisions

Using the best data available (actual extramural research obligations reported to either SBA or NSF), we determined that 4 of 11 participating agencies in fiscal year 1983 and 8 of 11 agencies in fiscal year 1984 met or exceeded their mandatory SBIR funding percentages. Table 2.5 shows each agency's SBIR funding compliance and the narrow margin (less than .06 percent) by which most agencies fell short of the required percentages.

Table 2.5:

Agencies' Compliance with Legislated SBIR Funding Requirements

	FY 1983					FY 1984				
Agency	Actual extra mural obliga tions reported to NSF or SBA	SBIR dollars awarded reported to SBA	Required allocation percentage	Actual allocation percentage	Did agency comply?	Actual extra mural obliga tions reported to NSF or SBA	SBIR dollars awarded reported to SBA	Required allocation percentage	Actual allocation percentage	Did agency comply?
	-----	-----	-----	-----	-----(000)-----	-----	-----	-----	-----	-----
USDA	$ 288,500	$ 555.4	0.2	0.192	No	$ 270,200[g]	$ 1,683.3	0.6	0.623	Yes
DOD	14,932,800[a]	20,086.0[b]	0.1	0.134	Yes	16,304,130[a],[h]	44,584.0[c]	0.3	0.273	No
DOE	2,618,605[d]	4,985.0	0.2	0.190	No	2,537,200[d]	16,392.8	0.6	0.646	Yes
ED	100,200	311.0	0.2	0.310	Yes	105,200	693.7	0.6	0.659	Yes
HHS	3,318,342[g]	7,300.7	0.2	0.220	Yes	3,760,162[g]	23,320.2	0.6	0.620	Yes
DOI	108,400	208.0	0.2	0.192	No	76,800	805.8	0.6	1.049	Yes
DOT	272,100	253.4	0.2	0.093	No	272,100[h]	1,677.0	0.6	0.616	Yes
EPA	147,500	248.0	0.2	0.168	No	156,500	852.8	0.6	0.545	No
NASA	1,527,200	50.0[e]	0.2	0.003	No	1,778,600	5,000.0[e]	0.6	0.281	No
NSF	926,700[g]	5,173.0[f]	0.2	0.558	Yes	1,088,350[g]	6,964.8[f]	0.6	0.640	Yes
NRC	183,900	399.2	0.2	0.184	No	167,800	1,144.0	0.6	0.682	Yes

[a] Represents actual extramural obligations reported to NSF minus a 10% deduction for intelligence R&D.

[b] Includes phase II awards under Defense Small Business Advanced Technology (DESAT) Program for $4.787 million.

[c] Includes awards under DESAT for $3.062 million.

[d] Represents actual extramural obligations reported to NSF minus deduction for atomic energy defense programs.

[e] NASA awards made with FY 1983 SBIR funds totaled $4.95 million. However, virtually all of the awards were made in early FY 1984, making them FY 1984 obligations. Awards made with FY 1984 SBIR funds totaled $13.4 million, virtually all of which were made in FY 1985, making them FY 1985 obligations.

[f] All awards resulted from prior years' solicitations.

[g] Actual extramural obligations reported to SBA. These were the only agencies that reported actual extramural obligations to SBA.

[h] SBA maintains that DOD's FY 1984 extramural budget should be $17,879,000,000 and that DOT's FY 1984 extramural budget should be $422,700,000. (See following pages.)

DOD SHOULD DETERMINE AND CONSISTENTLY APPLY A SINGLE BASIS FOR CALCULATING R&D DOLLARS

A disagreement between SBA and DOD over the amount of DOD's fiscal year 1984 extramural R&D budget surfaced a fundamental difference of opinion as to the proper basis for calculating that amount. SBA, using figures that DOD had reported in NSF's annual survey of federal R&D funding, estimated DOD's extramural budget to be about $17.9 billion, while DOD contended that the proper figure was actually about $2 billion less. The primary reason for the difference was that DOD excluded the operational systems development category of funds in its research appropriations when calculating extramural R&D dollars reported to SBA. DOD excluded the category because it believed that the category did not conform to the statutory definition of R&D. SBA maintained that the disputed funds should be included in DOD's extramural budget because DOD had classified its operational systems funds as research funds when reporting under NSF's annual survey and the President's budget prepared by OMB, both of which use the same definition of R&D as does the SBIR program act.

SBA estimates that the difference in extramural budget figures will increase from the $2 billion in fiscal year 1984 to more than $7 billion in fiscal year 1985. More importantly, these differences translate into respective differences of $10.8 million and $35.6 million in the amounts that DOD must spend under its SBIR programs--more than enough to mean the difference between DOD's compliance and noncompliance with the act's SBIR program funding provisions.

In 1983 the Comptroller General of the United States decided that the nature of the activities being funded, rather than labels applied to appropriations, should be the basis used to determine the amount of agencies' extramural R&D budgets for purposes of the SBIR program act. DOD, in commenting on a draft of this report, said that it had carefully applied this principle in reevaluating its position and had reaffirmed that the subject activities do not fall within the act's definition of R&D. We believe, however, that DOD's plans to continue classifying the activities as R&D when reporting funding information for other purposes raises serious doubt regarding the adequacy of its reevaluation efforts.

Disagreement over DOD's extramural R&D budget

DOD obtains R&D funds under appropriations entitled "Research, Development, Testing and Evaluation" (RDT&E). The appropriations are subdivided into 6 categories: Research (6.1), Exploratory Development (6.2), Advanced Development (6.3), Engineering Development (6.4), Management and Support (6.5), and Operational Systems Development (6.6). The disagreement over DOD's extramural R&D budget centers on Operational Systems Development (6.6).

According to DOD's budget manual, the Operational Systems Development category includes those projects still in full-scale engineering development but which have either been approved for production or for which production funds for either the budget year or subsequent fiscal year have been included in DOD's budget submission. DOD has taken the position that funds in this category do not conform to the definition of R&D contained in the SBIR statute. Accordingly, DOD excludes the extramural portion of funds in this category from the extramural R&D dollars that it reports to SBA under provisions of the act.

SBA, on the other hand, maintains that funds in category 6.6 should be counted as part of DOD's extramural R&D dollars. SBA argues that DOD includes the extramural portion of funds in category 6.6 when reporting extramural R&D funding data in the NSF annual survey of federal R&D. As discussed previously, SBA uses the NSF survey data to check the reasonableness of funding figures that agencies report to it under the act. SBA uses the NSF survey instead of other potential independent data sources because it identifies extramural (rather than just total) R&D funding.

The Acting Administrator, Office of Innovation and Research Technology, SBA, also argues that DOD includes category 6.6 funds when reporting total R&D funding data to OMB in connection with the President's budget. Noting that the SBIR program act, the NSF survey, and the budget all use the same definition of R&D, SBA considers the category 6.6 activities to be R&D and thus maintains that extramural funds in that category should be counted as part of DOD's extramural R&D budget.

DOD acknowledges that it uses the above different bases for computing R&D funding data. In a March 1984 letter to SBA, however, DOD asserted that its method of computing extramural R&D figures for SBIR purposes was consistent with a definition agreed to in 1982 by DOD, SBA, OMB, and the Subcommittee on General Oversight of the House Committee on Small Business. When we asked for documentation of this agreement, DOD provided us with an October 1982 letter to OMB and the House Subcommittee that explained the fund categories that DOD intended to include in its extramural R&D budget figures. DOD could not, however, provide us with documentation showing that the other parties either accepted or rejected its intended method. SBA told us that it did not make such an agreement with DOD.

Resolving this disagreement is important because it directly affects DOD's compliance with the statutory SBIR funding provisions. As previously explained, the act mandates that agencies spend specified percentages of extramural R&D funds through their SBIR programs. For this reason, differences in extramural R&D amounts translate into different SBIR program funding requirements. In the DOD situation, the resulting difference is sufficiently large to make the difference between compliance and noncompliance with the act.

The effect of the disagreement on DOD's achievement of SBIR program funding requirements for fiscal year 1984 is shown in table 2.6. Note that actual SBIR spending exceeded the required amount per DOD figures, but fell short of the requirement based on SBA's figures.

Table 2.6:

Effect of Differing DOD/SBA Extramural Budget Figures on DOD's Achievement of Required SBIR Funding Levels in Fiscal Year 1984

	Per SBA	Per DOD	Difference
	-------------(millions)-----------		
Extramural R&D budget	$17,879	$15,848	$2,031
Statutory percentage for SBIR	0.3%	0.3%	
Minimum SBIR funding requirement	53.6	42.8	10.8
Actual SBIR funding[a]	44.6	44.6	
Amount over (under) requirement	(9.0)	1.8	

[a] Includes DESAT awards.

The likely effect of the differing budget figures will be more pronounced in fiscal year 1985. SBA projects that the gap in extramural R&D budget figures will widen to $7.12 billion,[9] which would equate to a $35.6 million difference in required SBIR funding.

Previous Comptroller General decision

The Comptroller General ruled on a similar situation involving the computation of NASA's fiscal year 1983 extramural budget and resulting SBIR funding requirement. The review and decision resulted from NASA's specific request. The Comptroller General's March 1983 decision[10] stated that NASA should apply the SBIR program act's definition of R&D without regard to appropriation titles in calculating its 1983 SBIR minimum funding requirement--a principle we believe applies to the current DOD situation.

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[9] Computed as $35.6 million (the difference between SBA and DOD estimates of DOD's FY 1985 SBIR funding requirement) divided by 0.5 percent (DOD's statutory percentage for FY 1985).

[10] 62 Comp. Gen. 232 (1983).

The central question in the NASA case was whether its required SBIR funding amount should be calculated as a percentage of total funds appropriated under the title "Research and Development" or whether it should be calculated instead by distinguishing between R&D activities and operational activities, both of which were included under the R&D appropriation. At issue were a number of programs, most notably the space shuttle program, which NASA's budget submission and related documents recognized had concluded their research and development phase and had become operational. As in the DOD situation, NASA had consistently classified the activities in question as R&D for purposes of NSF's annual survey and OMB's Special Analysis K (a summary of federal research funds in the President's budget). For this reason, SBA contended that the activities in question should be counted as R&D for the purpose of calculating NASA's required SBIR funding level.

The Comptroller General maintained, however, that the Congress clearly appropriated funds for certain NASA operational activities under the title of R&D and that it would be contrary to congressional intent for NASA's required SBIR funding level to be based on amounts not available for R&D. He therefore concluded that NASA's SBIR funding requirement should be based only on those programs funded through its R&D appropriation that actually constitute R&D as defined by the SBIR program act. The Comptroller also noted that by regularly classifying the entire appropriation as R&D funding in data reported for NSF's annual survey and OMB's Special Analysis K, NASA created a misleading impression of the total amount of funds available for R&D and thus for application to SBIR programs. In this regard, he endorsed OMB's suggestion that NASA (in addition to excluding operational activities from Special Analysis K data, as NASA had already begun doing in the fiscal year 1984 budget) change the title of its R&D appropriation to reflect its operational activities.

We did not take the additional time necessary to determine whether or not the specific DOD activities funded under category 6.6 meet the statutory definition of R&D.

A consistent DOD position is needed to resolve the disagreement

In commenting on a draft of this report, DOD said that it had very carefully examined the act's definitions of research and extramural budget and had reaffirmed its position that the activities funded under the 6.6 category are not included. DOD said that in so doing, it took into account the principle established in the Comptroller General's decision in the NASA case in that its conclusion was governed by the nature of the activities rather than labels attached thereto. Nevertheless, DOD subsequently told us that it would continue to classify the 6.6 activities as R&D for purposes of NSF's annual survey and the President's budget.

In our view, DOD's persistence in classifying these funds differently for SBIR purposes raises serious doubt regarding the adequacy of its recent reevaluation efforts and needlessly prolongs the disagreement with SBA. Given that the law establishing the SBIR program, the NSF survey, and OMB use the same definitions, we fail to see how DOD can logically conclude that the activities in category 6.6 are not R&D in the case of SBIR, but that they are R&D for the other purposes. As discussed previously, it is this inconsistent treatment that causes the disagreement with SBA. Accordingly, we believe that DOD needs to make a definitive decision as to whether or not the subject activities are R&D and demonstrate its resolve by consistently applying its decision when reporting to NSF and OMB. SBA told us that this action would resolve its disagreement with DOD.

DOT AND SBA SHOULD RESOLVE DISAGREEMENT OVER DOT's FISCAL YEAR 1984 EXTRAMURAL BUDGET

SBA and DOT have disagreed about the correct amount of DOT's extramural R&D budget for both fiscal years 1983 and 1984. The agencies' figures differed by almost $175 million ($272.2 million vs. $97.6 million) in fiscal year 1983 and by almost $123 million ($422.7 million vs. $300 million) in fiscal year 1984.

The 1983 and 1984 discrepancies resulted because (1) according to DOT, it mistakenly classified certain funds as extramural R&D in its NSF annual survey when the funds were actually intramural R&D, (2) DOT excluded those extramural R&D obligations occurring in fiscal year 1983 and fiscal year 1984 that resulted from prior year appropriations, and (3) DOT used an inappropriate definition of extramural R&D when computing fiscal year 1983 figures reported to SBA.

DOT corrected its definition of extramural R&D in fiscal year 1984 and plans to officially revise its reported 1984 extramural figures to reflect the misclassified extramural funds. SBA maintains--and we agree--that DOT's fiscal year 1984 extramural budget reported to SBA should also be adjusted to include the fiscal year 1984 obligations resulting from prior year appropriations because, as discussed previously, the act requires that extramural R&D budgets be determined on the basis of actual obligations during the year rather than on amounts appropriated.

Table 2.7 shows the difference between SBA's and DOT's computation of DOT's fiscal years 1983 and 1984 extramural budgets. It also highlights the corresponding difference in apparent compliance with the act's SBIR funding provisions. Under the act, DOT was required to spend at least 0.2 percent and 0.6 percent of its fiscal year 1983 and fiscal year 1984 extramural R&D budgets, respectively, via the SBIR program.

Table 2.7:

DOT's FY 1983 and FY 1984 Extramural R&D Budgets

	FY 1983			FY 1984		
	As determined by SBA	As determined by DOT	Difference	As determined by SBA	As determined by DOT	Difference
	(000)					
Extramural budget	$272,158	$97,600	$174,558	$422,700	$300,000	$122,700
Amount of SBIR awards	253	253	-	1,677	1,677	-
Percent of extramural budget awarded via SBIR program	.093	.259	.166	.397	.559	.162

One reason for the difference in fiscal year 1983 figures was that DOT excluded from figures reported to SBA "nondiscretionary" extramural research obligations--those from funds for which the Congress designated intended recipients. Following discussions with SBA, DOT's general counsel subsequently determined that the SBIR program act did not support such exclusions; DOT revised its extramural research definition accordingly for fiscal year 1984.

Another reason for the differences was that, when reporting to SBA for both years, DOT excluded amounts it said were really intramural obligations erroneously reported as extramural obligations in the NSF annual survey. According to a DOT budget analyst, this error occurred when an incorrect historical percentage figure was used as a shortcut to divide total R&D obligations into intramural and extramural portions. DOT informed SBA in November 1984 that it had initiated action to correct this error in the next (fiscal year 1985) publication of the NSF annual survey data. (As previously noted, the actual obligations for a fiscal year are reported in the NSF annual survey which is usually submitted in March of the following fiscal year.) SBA subsequently notified DOT that it will adjust its determination of DOT's fiscal year 1984 extramural budget accordingly as soon as the revised figures are officially published.

A third reason for the differences between SBA's and DOT's extramural budget figures was that DOT, when reporting to SBA, excluded fiscal year 1983 and fiscal year 1984 extramural obligations resulting from funds appropriated in prior years. DOT's general counsel interpreted the term "total obligations," as used in the act's definition of extramural budget, to mean the obligational authority contained in the appropriation act or acts for the particular year. Under DOT's appropriation acts, however, research funds are "no-year money," which if not obligated in the year appropriated may be obligated in following years. Based on the general counsel's definition, DOT thus excluded from its extramural budget those obligations ($26.3 million) that were funded from prior-year appropriations.

SBA notified DOT of its disagreement with DOT's interpretation, stressing its position that the act clearly requires that the extramural budget be based on the actual obligations made during the fiscal year rather than on the amount appropriated for the fiscal year. SBA therefore reaffirmed its position that DOT's fiscal year 1984 extramural budget should be increased by $26.3 million.

As discussed earlier, we share SBA's belief that the act requires agencies to compute their extramural budgets on the basis of actual obligations. In its August 1985 comments on our draft report, DOT agreed to begin (with fiscal year 1985) reporting all extramural research obligations for the year, regardless of when the funds were appropriated.

CONCLUSIONS

Participating agencies, for the most part, conducted SBIR programs in accordance with the act and SBA's policy directive during fiscal years 1983 and 1984. Most agencies either met or came very close to their required SBIR percentages. Four of 11 participating agencies in fiscal year 1983 and 8 of 11 agencies in fiscal year 1984 technically awarded the required percentage of their extramural research budgets through SBIR programs. In fiscal year 1983, five of the seven noncomplying agencies awarded between 0.16 and 0.19 percent of their extramural budgets, compared with a 0.2-percent requirement. The other two noncomplying agencies awarded 0.093 and 0.003 percent of their respective extramural budgets, compared with a 0.2-percent requirement. In fiscal year 1984, two of the three noncomplying agencies awarded 0.28 and 0.55 percent of their extramural budgets, compared with a 0.6-percent requirement; the other noncomplying agency awarded 0.27 percent of its extramural budget, compared with a 0.3-percent requirement.

Most agencies have not reported funding amounts to SBA based on actual obligations, which we believe the act requires. We recognize the difficulty of agencies reporting actual extramural obligations by SBA's late December due date, but we believe that agencies could report this particular data if SBA changed its deadline to the first of March. Agencies already compile and report to NSF their actual extramural research obligations, normally due by the first of March. Accordingly, we and most of the agencies see no difficulty in reporting this data to SBA at the same time. A later SBA reporting deadline for this one data element should not appreciably delay SBA's annual SBIR report to the Congress, and it would permit the report to more accurately reflect agencies' compliance with this important provision of the law.

The issue of whether DOD's extramural budget should include a certain category of DOD's RDT&E appropriations has been, and continues to be, the subject of disagreement between DOD and SBA. SBA maintains that the funds should be classified as research funds when computing DOD's extramural budget because DOD classified the funds as such when reporting under NSF's annual survey and the President's budget and because the NSF survey and President's budget use the same definition of R&D as contained in the SBIR program act. DOD, on the other hand, believes that the category does not conform to the statutory definition of R&D. Timely resolution of this disagreement is important because SBA estimates that the resultant difference in extramural budget figures will increase from $2 billion in fiscal year 1984 to more than $7 billion in fiscal year 1985--more than enough to mean the difference between DOD's compliance and noncompliance with the act's SBIR program funding provisions.

A principle set forth in a 1983 Comptroller General decision in connection with a similar situation involving NASA's extramural budget is applicable to the DOD situation. That is, the nature of the activities being funded, rather than labels applied to appropriations, should be the basis used to determine the proper amount of agencies' extramural R&D budgets for purposes of the act. While DOD claims to have applied this principle in reevaluating the issue, we question the adequacy of DOD's effort on the basis that its result directly contradicts DOD's classification of the funds for other than SBIR purposes. DOD labels the activities in the 6.6 appropriation category research when reporting to NSF and OMB but not when reporting to SBA for SBIR purposes although all three recipients define research in the same way. It is difficult to see the logic in DOD's position. In our opinion, DOD's persistence in maintaining such a position casts continued doubt on the accuracy of its SBIR funding figures and needlessly prolongs its dispute with SBA.

DOT has taken steps to correct fiscal year 1984 extramural obligation figures reported to NSF--an action which will partially resolve a DOT-SBA disagreement over DOT's fiscal year 1984 extramural budget. Regarding the unresolved aspect of the disagreement, SBA maintains, and we agree, that the act requires extramural R&D budgets to be determined on the basis of actual obligations incurred during the year rather than on amounts appropriated. Therefore, we believe that DOT should have included funds obligated from prior-year appropriations in its fiscal year 1984 extramural budget. By doing so, however, DOT would have only slightly lowered (by .045 percent) the reported percentage of its extramural budget awarded under its SBIR program.

RECOMMENDATION TO THE HEADS OF AGENCIES WITH SBIR PROGRAMS

To permit proper determination of compliance with the funding provisions of the Small Business Innovation Development Act of 1982, we recommend that the heads of appropriate agencies with SBIR programs[11] report actual fiscal year extramural research and development obligations (not estimates) to SBA.

RECOMMENDATION TO THE SECRETARY OF DEFENSE

We recommend that the Secretary of Defense determine definitively which, if any, activities funded under the Operational Systems Development category of DOD's Research, Development, Testing and Evaluation appropriations conform to the common definition used in reporting research and development funding for purposes of the Small Business Innovation Development Act of 1982, the National Science Foundation's annual survey of federal R&D funds, and the special analysis of federal R&D funds in the President's budget. The Secretary should then instruct the responsible DOD officials to consistently apply the Secretary's determination when reporting R&D funding data to the three recipients.

RECOMMENDATION TO THE SECRETARY OF TRANSPORTATION

We recommend that the Secretary of Transportation, beginning in fiscal year 1985, include all research and development obligations, regardless of the year during which the funds were appropriated, when reporting annual extramural R&D funding data to SBA for purposes of the Small Business Innovation Development Act of 1982.

RECOMMENDATIONS TO THE ADMINISTRATOR, SMALL BUSINESS ADMINISTRATION

We recommend that the Small Business Administrator

- --revise SBA's policy directive containing reporting requirements for SBIR program data to require agencies to report "extramural R&D obligations" rather than "extramural R&D budget authority" and
- --revise the deadline for agencies' reporting of this data to March 1 of each year, the deadline for agencies reporting the same data to the National Science Foundation.

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[11] This recommendation requires a change to current practices by DOE, DOI, DOT, DOD, ED, EPA, NASA, and NRC.

AGENCY COMMENTS AND GAO RESPONSE

The affected agencies generally agreed with our recommendation for reporting to SBA actual extramural R&D obligations. SBA concurred with our recommended revisions to its policy directive and to its deadline for agencies' reporting of extramural R&D obligations. DOT stated that it had taken action to implement our recommendation on reporting all extramural R&D obligations made during each fiscal year.

SBA and DOD, however, did not agree with our proposal to resolve their disagreement over the composition of DOD's extramural research budget. We proposed that the agencies reach agreement as to whether the Operational Systems Development category (6.6) of DOD's RDT&E appropriation should be included in computing DOD's extramural research budget and that the agencies base their decision on the nature of the activities funded, i.e., the extent to which the activities conform to the act's definition of research. We also proposed that the agencies request the Comptroller General to provide a formal decision should they be unable to resolve the situation.

In commenting on our proposal, both SBA and DOD believed that DOD is responsible for determining its own extramural budget. DOD, however, added that it had reexamined the 6.6 activities in light of the act's definitions of "research" and "extramural budget" and had reaffirmed its conclusion that the activities are not included.

We question the adequacy of DOD's determination. In response to our subsequent inquiries, DOD indicated that it would continue to classify the 6.6 funds as research when reporting such funds to NSF's annual survey and to OMB. As already noted, the SBIR program, the NSF annual survey, and OMB reporting instructions use the same fundamental definition of R&D. Accordingly, we do not understand how DOD can classify the activities differently for purposes of its SBIR program. In our opinion, DOD should definitively determine whether the 6.6 category is research and consistently apply that determination in its reporting of research funds to SBA, NSF, and OMB. SBA, subsequent to its written comments, said that such consistent reporting by DOD would resolve the controversy. Because resolution of the disagreement is our objective, we modified our final recommendation accordingly.

CHAPTER 3

NON-SBIR GOALS ACTIVITIES HAVE BEEN LIMITED

The Small Business Innovation Development Act requires agencies having annual research budgets in excess of $20 million to establish goals for non-SBIR funding agreements with small businesses and to report data on such goals to the Small Business Administration. Each agency's goal must at least equal the percentage of its research budget awarded to small businesses during the preceding year. We found problems with the completeness and appropriateness of goal data that agencies submitted to SBA for fiscal years 1983 and 1984--the first 2 years that the goal requirement applied. We also found that while most agencies reported some goal data, they gave minimal effort to assuring goal achievement.

In three cases, agencies did not establish non-SBIR goals. AID, ED, and VA met the legislative criteria requiring agencies to set goals but did not establish goals in either fiscal year 1983 or fiscal year 1984. These agencies either were of the opinion that they did not meet the legislative criteria or they experienced internal confusion as to the office responsible for establishing the goals. We believe that the three agencies should report required fiscal year 1983 and fiscal year 1984 goals data to SBA as soon as possible, but ED cannot do so because of past limitations in its information system. A legislative amendment is needed, however, to resolve a question arising from a situation involving HUD--should an agency that is required to establish a goal in a given year be required to do so every year thereafter, even though its R&D funding drops below the prescribed $20 million minimum?

We noted that while most agencies collected and reported after-the-fact goal data, few took specific goal-achievement actions. In many cases, agencies did not set goals early in the fiscal year and make the goals known to those responsible for awarding R&D funds. Although we recognize that other factors influence agency goal achievement and that these steps will not always ensure success, we believe that such actions are necessary first steps in agencies' efforts toward goal achievement.

LEGISLATIVE REQUIREMENTS FOR NON-SBIR GOALS

The Small Business Innovation Development Act, in addition to establishing the SBIR program, requires agencies to "establish goals" for research funding agreements to small businesses. Such agreements can be in the form of contracts, grants, or cooperative agreements. The law requires any agency with an annual research budget in excess of $20 million to set goals which must be not less than the percentage of total research funds that the agency awarded to small businesses the preceding year. In addition, agencies are to report annually to SBA their goal, how much money they actually awarded to small businesses for research, and the number and dollar value of awards over $10,000.

One of the act's purposes is to enlarge the role of small businesses in federally funded research and development. The Congress included the goals provision because it intended the SBIR awards to be a net addition to agencies' existing small business research awards. Thus, we refer to these awards as "non-SBIR goals." SBIR awards cannot be counted toward meeting an agency's goal nor can non-SBIR goals awards be counted against required SBIR funding percentages.

SBA has determined that the following agencies are required to establish non-SBIR goals:

Agency for International Development.
Department of Agriculture.
Department of Commerce.
Department of Defense.
Department of Energy.
Department of the Interior.
Department of Justice.
Department of Transportation.
Department of Education.
Department of Housing and Urban Development.
Department of Health and Human Services.
Environmental Protection Agency.
National Aeronautics and Space Administration.
Nuclear Regulatory Commission.
National Science Foundation.
Smithsonian Institution.
Tennessee Valley Authority.
Veterans Administration.

According to SBA, in fiscal years 1983 and 1984 these agencies had research budgets in excess of $20 million, the criteria established by the act. SBA based its determination on "estimated obligations," consistent with its procedures for determining amounts that agencies must spend in their SBIR programs. As with the SBIR programs, SBA obtained estimated obligation figures from reports agencies submitted to the National Science Foundation for its annual survey and report on federal research funds (see ch. 2). For fiscal year 1984, however, SBA also later checked its initial determinations using actual research obligation figures in OMB backup data for the President's budget. We reviewed actual fiscal year 1983 and fiscal year 1984 research obligations reported to OMB and found that, with the possible exception of HUD in fiscal year 1984, SBA correctly identified all eligible agencies. (As detailed later in this chapter, HUD's actual obligations fell below $20 million in fiscal year 1984, raising questions about its continued eligibility.)

SBA SHOULD USE REVISED DATA TO EVALUATE AGENCIES' GOAL ACHIEVEMENT

For fiscal year 1983, SBA requested the following data from the agencies required to have non-SBIR goals:

- --Total research budget for both the current and preceding fiscal year.
- --Total research dollar awards to small businesses for both the current and preceding fiscal year.
- --Awards to minority-and women-owned businesses for both the preceding and current fiscal year.
- --Current fiscal year's small business dollar goal.
- --Percent of goal achieved for current fiscal year.
- --Total number and dollar value of funding agreements to small businesses for current fiscal year categorized by contracts, grants, and cooperative agreements.
- --Total number and dollar value of funding agreements to other than small businesses for current fiscal year categorized by contracts, grants, and cooperative agreements.

The "total research dollar" figure and the "dollars awarded to small businesses" figure are critical data elements for determining an agency's non-SBIR goal. An agency's total research budget is used as the "base" or denominator by which the amount awarded to small businesses is divided. The resulting percentage figure is the agency's "goal" in the following year. In some cases agencies did not provide one or both of these numbers and, thus, no goal could be established. In other cases agencies provided figures for all requested data elements, but did not report their total research dollars. Instead, these agencies reported only extramural dollars where total research dollars were called for. An agency's total research budget, as defined by SBA and supported by the legislation, includes both intramural dollars (money spent on research to be done in the agency itself) and extramural dollars (money spent outside the agency for research). While the base used to calculate the goal does not affect the actual dollars awarded to small businesses, it does affect the percentage. Percentage goals based on extramural research obligations will appear higher than those based on total research obligations, even when actual small business dollars are the same.

Non-SBIR goals data was inconsistent for fiscal year 1983

Six agencies provided incomplete data to SBA in their fiscal year 1983 annual reports while two provided no data at all. The agencies that submitted incomplete data were DOC, DOJ, DOT, EPA, NASA, and SI. Three of the six--DOJ, DOT, and NASA--said that they could not provide all requested data because SBA's reporting form arrived late and that they had difficulties retrieving certain requested fiscal year 1982 data from their information systems. SBA's reporting form requested previous year's data for research money spent with small businesses--data which the agencies' information systems did not track during fiscal year 1982. EPA said that, because of internal confusion, it did not implement the non-SBIR goal provisions until April 1984. For this reason, EPA submitted a fiscal year 1983 report with only fiscal year 1983 data and estimated fiscal year 1984 data. SI, reporting in April and using its own reporting form, reported fiscal year 1983 data and estimated fiscal year 1984 data.[12] DOC did not provide dollar amounts for awards to small businesses for fiscal year 1983. ED and AID provided no data at all for reasons which are discussed later in this chapter.

In all, 10 agencies responded to all required data elements. However, 6 of the 10 reported extramural dollars rather than total research dollars. Although the actual amount of money an agency awards to small businesses does not change for that year, if the agency calculates its goal on one base rather than another, the act requires that non-SBIR goals be based on an agency's total research budget, which includes both intramural and extramural research dollars.

A possible contributing factor to most agencies not reporting the required total research dollars is that SBA's reporting form did not define specifically what information should be included for certain data elements. For example, item 1 on the SBA goals report format asked for "Previous Fiscal Year Total R, R&D Awards," without defining the term "awards." Also, item 3 on the same report requires the current fiscal year "Total R, R&D Budget," again without defining "budget." Reporting requirements for the non-SBIR goals provisions in SBA's August 1983 policy directive adds more confusion in that it called for an agency's "current fiscal year total R, R&D budget authority." This is inconsistent with the act, which requires that total research obligations be used in calculating non-SBIR goals.

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[12] SI did not report until April because it did not believe the act applied to SI. In a letter to SBA, SI stated that it was not a federal agency as defined by the act but also stated that it was SI's policy to support such programs. In the end, SI chose to submit a goals report and not pursue its possible exemption at that time.

Fiscal year 1984 goals data improved but still contained problems

Many of fiscal year 1983's data problems were resolved in fiscal year 1984. Specifically, most agencies reported to SBA and submitted complete data. Of the 18 goals agencies, 14 reported information for all the required data elements. Only three reported no data, while one reported incomplete data. In addition, SBA revised its reporting forms by adding definitions of the data element requirements as well as by showing how to calculate a goal. SBA officials also held a meeting for all agency non-SBIR goals representatives in order to explain the form and what data each item on the form required. Despite these improvements, differences existed in the total research dollar amounts which agencies reported to SBA for fiscal year 1984 and those which the agencies reported to OMB for the President's budget. We found that even though the act requires agencies to use the same definition of research for their submissions to SBA as that which OMB requires for agency budget submissions, agencies reported different amounts to the two agencies.

We requested and received explanations for the differing amounts from 14 of the 18 goals agencies.[13] Four of the 14 agencies explained that they had reported extramural dollars to SBA by reporting only contract dollars (and excluding items like interagency agreements, grants, and cooperative agreements). Agencies said that these items were included in their submissions to OMB. One agency excluded administrative costs for its in-house research efforts (salaries, expenses, and travel) when reporting to SBA but not OMB. Two other agencies said that they reported estimated figures to SBA while reporting actual figures to OMB. Two agencies whose submissions to SBA were higher than their submissions to OMB had included the cost of facilities in their data to SBA. While OMB collects agency figures for the cost of facilities, OMB requires agencies to separate the cost of doing research (total conduct of R&D) from the cost of facilities in their budget submissions. The act's definition of research and development is essentially the same as OMB's definition for "total conduct of R&D," which does not include the cost of facilities. The remaining five agencies gave various other reasons for the differences.

As explained earlier (see ch. 2), the SBIR legislation and OMB's guidance on preparing agency submissions for the President's budget use the same fundamental definitions for research. We did not find any compelling reasons in the agencies' explanations for why they reported on different activities in SBA and OMB reports.

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[13] We did not request explanations from four agencies--AID, VA, HUD, and ED. AID, VA, and HUD did not report to SBA at all in fiscal year 1984 for reasons discussed later in this chapter. ED reported partial information--its total obligations for research--but this figure did not differ from that reported to OMB.

We believe, therefore, that all agencies required to set non-SBIR goals should take steps to assure that these reports are consistent.

A possible contributing factor for inconsistencies in these budget figures is the timing of the two reports. SBA requires agencies to submit annual reports by December 30th. Final agency budget submissions to OMB for the President's budget are due anywhere from mid-to late January. In our discussions with OMB, the official responsible for collecting agencies' submissions for research said that most agencies reconcile figures and submit revisions to OMB up until the final cut-off date. Most agencies told us that they could not report the same figures to SBA and OMB for this reason, but that they could report the same figures to both agencies if SBA delayed its deadline for reporting non-SBIR goals data to the end of January. Because agencies are still finalizing obligation figures until the end of January for OMB, we believe that, to aid agencies in reporting consistent numbers to both sources, SBA should move back its deadline for reporting non-SBIR goals data to the same time.

AGENCIES NEED TO TAKE FURTHER STEPS TO ACHIEVE GOALS

The act does not prescribe specific non-SBIR goal-setting actions that agencies should take, nor does it require that SBA do so. The act neither specifies when goals should be established, nor does it specifically require that the goals be met. SBA's policy directive addresses only data-reporting requirements for non-SBIR goals.

We believe that agencies need to make reasonable efforts to meet their established goals. The legislative history indicates that the non-SBIR goals provision was included to assure that the SBIR awards resulted in a net increase of awards to small businesses since agencies could not count the SBIR awards towards their goals. In order to realize this objective, agencies must do more than establish goals--they must reach them.

It was not practical for us to determine whether agencies actually met their established goals. Because of the previously discussed data problems for both fiscal years 1983 and 1984, we did not consider data reported to SBA to be an appropriate basis for judging goal achievement. Independently developing reliable figures would require, in essence, a complete audit of the 18 agencies' research obligations. However, we believe that agencies should take the following actions because goals, which are required by the act, are targets for future actions, not only data reported at the end of the year.

--Determine goals in the beginning of the fiscal year rather than as an after-the-fact exercise.

- --Inform bureau/office officials who are responsible for awarding R&D funds of the agency goal early in the year so that they can plan procurement actions accordingly.

- --Collect the information needed to establish goals early to determine whether the agency has achieved its goal by the end of the fiscal year, and to enable fulfillment of SBA's reporting requirements.

While we recognize that taking these steps will not guarantee goal achievement and that other factors are involved, we believe that they are preferable to leaving goal achievement essentially to chance by treating it as an after-the-fact reporting exercise, as many agencies have done thus far.

Agencies have put a minimum effort into non-SBIR goals achievement

While most agencies have collected and reported goals information to SBA, few have taken our other suggested goal-achievement actions. (See table 3.1.)

Table 3.1:

Number of GAO Goals Criteria Met by Agencies

	Fiscal Year 1983			Fiscal Year 1984		
	Set goals in advance	Collects information	Informs offices	Set goals in advance	Collects information	Informs offices
AID	—	—	—	—	—	—
DOC	X	X	X	X	X	X
DOD	X	X	X	X	X	X
DOE	X	X	X	X	X	X
DOI	X	X	X	X	X	X
DOJ	X	X	X	X	X	X
DOT	—	X	—	—	X	—
ED	—	—	—	—	X	—
EPA	—	X	—	—	X	—
HHS	X	X	X	X	X	X
HUD[a]	—	X	—	—	—	—
NASA	—	X	—	—	X	—
NRC	—	X	—	—	X	—
NSF	X	X	X	X	X	X
SI	—	X	—	—	X	—
TVA	—	X	—	—	X	—
VA	—	X	—	—	—	—
USDA	—	X	—	—	X	—

[a] HUD did not submit a report in fiscal year 1984 claiming exclusion from the goals provision because its research budget fell below $20 million.

Nine agencies in fiscal year 1983 and eight agencies in fiscal year 1984 met only one of our three suggested criteria--they collected information about their goals. By comparison, seven agencies in fiscal years 1983 and 1984 met all three of our criteria by also determining their goals early and informing bureaus about those goals. (These agencies also submitted annual reports to SBA.) For fiscal year 1983, two agencies--AID and ED--neither collected information nor submitted a report on their non-SBIR goals. In fiscal year 1984, three agencies--AID, HUD, and VA--did neither of these activities.

The responsible officials in AID, ED, VA, and HUD said that they did not collect or report non-SBIR goals data because either (1) their agencies did not meet legislative budget criteria requiring them to establish non-SBIR goals, (2) internal confusion existed as to which office was responsible for implementing these activities, or (3) data was lost in the process of preparing a report to SBA.

VA, ED, AND AID NEED TO TAKE ACTIONS TO MEET NON-SBIR GOAL PROVISIONS

Veterans Administration

Although VA's total research obligations for fiscal year 1983 and fiscal year 1984 were well above the $20 million statutory minimum ($163.9 million and $190.3 million, respectively), it did not "establish goals" in fiscal year 1984.[14] Officials in VA's Office of Small and Disadvantaged Business Utilization said that although VA's total research budget exceeded $20 million, most of the agency's research is done in-house. For this reason, the officials believed that VA should not be subject to the non-SBIR goals requirements and consequently had not collected data or reported to SBA. SBA sent a letter to VA on February 2, 1985, notifying officials that VA is required to establish goals and to report to SBA on them. VA said that it would do so in its August 1985 comments on our draft report.

Department of Education

ED did not set goals in either fiscal year 1983 or fiscal year 1984 but, according to the new director of its Office of Small and Disadvantaged Business Utilization, the agency will be doing so in fiscal year 1985. ED did submit a report to SBA for fiscal year 1984 but was able to report only total research data due to problems with obtaining other required information from its information system. It could not retrieve dollar amounts spent with small businesses and thus could not establish a goal. For fiscal year 1983, ED did nothing to meet non-SBIR goals provisions because of uncertainty as to which office should be responsible for doing so. According to the above official, there was confusion as to whether the responsibility should rest with ED's Office of Education Research, which is responsible for the agency's SBIR program, or with the Office of Small and Disadvantaged Business Utilization, which is responsible for implementing other small business goals in the agency. ED officials said that a decision was made later to place the responsibility for the non-SBIR goals with the Office of Small and Disadvantaged Business Utilization, but the director of that office had been on indefinite sick leave and subsequently died. The new director said that he would implement the goals provisions for fiscal year 1985 and that modifications are being made to ED's information system that will permit identification of required goals data for fiscal year 1985 and subsequent years.

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[14] VA reported goals data to SBA in fiscal year 1983, but that data reflected only the dollars of one organizational unit and not the entire agency.

Agency for International Development

AID neither established goals nor reported non-SBIR goals data for fiscal year 1983 or fiscal year 1984. For fiscal year 1983, AID officials responsible for implementing the goals provision said that they did not set goals because of some confusion as to which office was responsible for doing so. In addition, the officials said that the Office of Program Information and Analysis had collected the required goals information but that it was lost when transmitted to the Office of Small and Disadvantaged Business Utilization, which was to prepare the report to SBA in fiscal year 1983. Consequently, AID did not report to SBA. The AID official currently responsible for non-SBIR goals said that AID did not set goals in fiscal year 1984 because of remaining confusion as to which office would be responsible. However, AID said in its July 1985 comments on our draft report that it had assigned this responsibility to its Office of Small and Disadvantaged Business Utilization and that it would be soon submitting to SBA the required goals reports for fiscal years 1983 and 1984.

LEGISLATIVE GUIDANCE IS NEEDED FOR AGENCIES WHOSE R&D FUNDING DROPS BELOW THE STATUTORY MINIMUM

While the act provides criteria by which to determine whether an agency must establish goals, it does not stipulate whether an agency that was required to have goals one year should be excused from setting goals in a subsequent year because its research budget falls below the legislatively prescribed $20 million minimum. This situation occurred with HUD in fiscal year 1984.

Although HUD submitted a goals report for fiscal year 1983, HUD claimed that its research budget did not exceed the $20 million minimum requirement for participating in the goals program. Officials based their arguments on HUD's budget authority figures which totaled $18 million for fiscal year 1983. However, HUD's total fiscal year 1983 obligations for research were $22.6 million, exceeding the $20 million minimum.

In fiscal year 1984, HUD again maintained that it did not meet the $20 million threshold. In fiscal year 1984, however, HUD's total actual research obligations were $17.2 million, well below the required minimum. An SBA official responsible for preparing SBA's annual report to the Congress said that since the law does not provide for this situation and SBA does not have the authority to exclude agencies, it will simply report that HUD did not submit an annual report and HUD's reasons why. He said that because the law is silent on this matter, this is all SBA can do.

We agree that the law does not specifically address this situation. In our opinion, the language of the law is not sufficiently clear to determine whether the Congress expected agencies to set goals each year once they have done so or whether they can withdraw in any year for which they do not exceed the $20 million criteria. Accordingly, we believe that the act should be amended to prescribe a clear policy for such situations in the future.

CONCLUSIONS

While most qualifying agencies collected and reported required data on goals in both fiscal years 1983 and 1984, in most instances the reported data for fiscal year 1983 was either incomplete or inappropriate. Two qualifying agencies--AID and ED--reported no fiscal year 1983 data at all. As a result, information needed to either calculate an agency's goal or judge attainment of the goal was in most instances not available.

Reporting problems in fiscal year 1983 consisted primarily of agencies not reporting complete data (especially for the preceding year) and/or agencies reporting only extramural rather than total research dollars as the act requires. Calculating an agency goal on an extramural base instead of a total base does not change the actual dollar awards to small businesses for a given year, but it will change the percentage. In comparing agencies' goals, those established by using an extramural base will appear to be higher than those established by using a total base for that year, even though actual dollars may be the same. For example, if an agency has a total research budget of $100 and awarded $10 to small businesses, its goal, based on its total budget, is 10 percent (10 ÷ 100). If it chose to base its goal on its extramural budget, which was $50, its goal would be 20 percent (10 ÷ 50). However the actual dollars awarded to small businesses--$10--does not change.

SBA worked with the agencies to clarify reporting requirements, and the overall quality of reporting improved in fiscal year 1984. Although three qualifying agencies (HUD, VA, and AID) did not report goals data for fiscal year 1984, the remaining agencies, for the most part, provided all requested data elements. SBA, however, noted differences between the total research dollars that many agencies reported and their actual research obligations as reported in the President's budget.

Since both SBA and OMB require agencies to report actual obligations using the same fundamental definitions of research, we do not consider the agencies to have compelling reasons why amounts reported to the two agencies as total research funds for the preceding fiscal year should not agree. We believe that agencies should be able to provide SBA with goal-related data which adheres to the act's requirements and is consistent with data reported in the President's budget. Agencies would be better able to do so, however, if SBA delayed its reporting deadline for goals data by 1 month (to the end of January). This would more nearly coincide with the deadline for revising OMB figures and should, in our opinion, not materially delay SBA's annual report to the Congress.

The Congress, however, needs to establish a specific policy regarding a goals-related question which first surfaced in fiscal year 1984. In this instance, HUD, which qualified as a goals participant in fiscal year 1983, did not have the $20 million in research obligations requiring participation in fiscal year 1984. We believe that the act is not sufficiently clear to determine whether or not HUD must continue as a goals participant. While the law establishes criteria for mandatory goals participation, it does not indicate whether an agency must continue to set goals each year after meeting the criteria, or whether the participation criteria should be applied annually. However, because the mission and budgets of agencies change over time, it seems preferable to have an annual criterion. Having a minimum threshold implies that the Congress intended that below a certain size, it was not worthwhile to maintain the goals requirement.

While most agencies collected non-SBIR goals information and reported it to SBA, they usually did so as an after-the-fact exercise to fulfill SBA's reporting requirement. Few have taken steps to help assure that they meet their goals--steps such as setting goals early in the year and informing procurement offices of the goal. Although the act explicitly requires agencies to establish and report data on goals, the law's intent is clearly that these goals should be met as well. The legislative history indicates that SBIR awards are to be a net addition to awards already being given to small businesses. Obviously goal achievement rather than just goal setting is essential if the congressional objective is to be realized.

Finally, as indicated earlier, SBA reporting forms and policy directives in fiscal year 1983 were unclear regarding the definition of "total R, R&D dollars." Many agencies interpreted this to mean just extramural research dollars and reported such. Additionally, SBA's August 1983 policy directive required that agencies report "total R, R&D budget authority," whereas the law requires obligations. In fiscal year 1984, SBA corrected its reporting form so that it now clearly defines each data element. However, SBA still needs to conform its September 1984 policy directive so that it asks for obligations instead of budget authority.

RECOMMENDATION TO THE CONGRESS

When it comes up for reauthorization, the Congress should amend Section 4 of the Small Business Innovation Development Act of 1982 to clarify application of the criterion for determining which agencies must establish non-SBIR goals for research funding agreements with small businesses. Specifically, the Congress should resolve the ambiguity by making clear that whether an agency needs to establish goals should be determined annually by applying the stated criterion.

RECOMMENDATION TO THE ADMINISTRATORS OF THE AGENCY FOR INTERNATIONAL DEVELOPMENT AND THE VETERANS ADMINISTRATION

We recommend that the AID and VA Administrators submit to SBA data for fiscal years 1983 and 1984 regarding non-SBIR goals, in accordance with requirements contained in the Small Business Innovation Development Act of 1982 and SBA's policy directive.

RECOMMENDATIONS TO HEADS OF AGENCIES REQUIRED TO ESTABLISH NON-SBIR GOALS

We recommend that the heads of applicable agencies subject to the non-SBIR goals provisions of the Small Business Innovation Development Act of 1982:

--Reassess their respective agencies'[15] reports to OMB and SBA for fiscal years 1983 and 1984, make them consistent, and instruct the appropriate officials to take steps to ensure consistency of these reports in the future.

--After reviewing OMB and SBA reports, provide SBA with revised non-SBIR goals data where necessary.

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[15] This recommendation applies to the following agencies: DOC, DOD, DOE, DOI, DOJ, DOT, EPA, HHS, NASA, NRC, NSF, SI, TVA, and USDA.

--Instruct the appropriate officials in their respective agencies[16] to establish goals early in the fiscal year and make such goals known to officials responsible for awarding external R&D funds.

RECOMMENDATIONS TO THE ADMINISTRATOR, SMALL BUSINESS ADMINISTRATION

We recommend that the Small Business Administrator:

--Recompute agencies' non-SBIR goals using revised data for fiscal years 1983 or 1984 that agencies provide to SBA after reviewing previously submitted data for consistency with data reported to OMB. SBA also should use the recomputed fiscal year 1983 goals as the baseline data against which to evaluate goal achievement in subsequent fiscal years.

--Change the due date for agencies' submission of non-SBIR goal reports to the end of January to coincide with agencies' budget submissions to OMB.

--Revise SBA's policy directive containing reporting requirements for non-SBIR goals to require agencies to report "total R, R&D dollar obligations" rather than "total R, R&D budget authority."

AGENCY COMMENTS AND GAO RESPONSE

Most of the affected agencies generally agreed with our findings and recommendations concerning establishing and reporting data on non-SBIR goals, and several agencies said that they will take steps to correct the problems we cited. For example, AID said that it had clarified responsibility for establishing the goals as a result of our findings, and both AID and VA said that they would soon submit to SBA required data for fiscal years 1983 and 1984. A few agencies, however, disagreed with certain of our recommendations.

Small Business Administration

SBA, while agreeing with our administrative recommendations to it, questioned the need for our suggestion that the Congress clarify application of the criterion for determining which agencies must establish non-SBIR goals. SBA believed that the magnitude of the problem was not sufficient to warrant an amendment to the act. SBA said that instead it could resolve the problem through a revision of its policy directive.

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[16] This recommendation applies to the following agencies: USDA, AID, DOT, ED, EPA, NASA, NRC, SI, TVA, and VA.

Although we agree that this is not a serious problem, we do not believe that SBA has sufficient authority to resolve it administratively through its policy directive. We believe that the act authorizes a more limited regulatory role for SBA regarding non-SBIR goals than that authorized for the SBIR program. In the case of goals, SBA's regulatory authority is restricted to reporting requirements and gathering information via agencies' annual reports. Unlike SBIR programs, the act does not authorize SBA to establish policy directives for agencies' handling of the goals program. Thus, in our opinion, the Congress is the appropriate entity to clarify this provision of the law.

Department of Justice

DOJ disagreed with our recommendation for improving consistency in the reporting of research funding data to SBA and OMB. DOJ said that OMB and SBA use definitions for research that are "incompatible and will never permit consistency in reporting." DOJ points out that while SBA and OMB use the same basic definition of R&D, OMB reporting guidance adds a proviso not included in SBA reporting guidance. The OMB proviso lists several specific activities that agencies are to exclude from their R&D figures.

As discussed previously, we believe the SBA and OMB definitions are compatible. According to the responsible OMB official, the OMB definition of "research and development," including the proviso, is the generally accepted federal definition of these terms. The proviso simply identifies activities deemed not to conform to the basic definition. An NSF official confirmed this, stating that NSF's federal funds survey uses the same definition as does OMB. He added that SBA consulted NSF on the definition used in its policy directive. SBA's definition of R&D is essentially the same as that used by OMB and NSF except that it does not explicitly list activities not meeting the definition. Therefore, we believe that activities counted as research to OMB and NSF should be the same ones counted as research to SBA.

DOJ agreed with our recommendation that agencies, after reviewing prior years' research funding data reported to OMB and SBA, revise, where necessary, data reported to SBA. DOJ said that it had reviewed the reports and no revisions were necessary. We believe, however, that DOJ needs to send revised data to SBA. DOJ stated in its comments that it contracts for routine monitoring and evaluation of an operational program, that it includes these contract costs in R&D dollars reported to SBA, but that it excludes the same costs from R&D dollars reported to OMB. DOJ said that it excludes the costs when reporting to OMB because the OMB proviso (discussed above) specifically excludes monitoring and evaluation of an operational program. Because the proviso identifies activities deemed not to conform to the basic definition of R&D, we believe DOJ has reported research dollars to SBA which should not be classified as such.

Department of Defense

DOD concurred with our recommendation for consistent reporting to OMB and SBA and said that its reports to SBA have been consistent with DOD's method of reporting small business goals since the beginning of DOD's small business program. It added that future reporting to SBA will be conducted in the same manner. However, we believe that DOD's comments do not fully respond to our recommendation and that DOD needs to take action.

Regardless of DOD's reporting methods for its other small business goals, Public Law 97-219 requires that an agency calculate its non-SBIR goals as a percentage of its total research dollar obligations. DOD is one of the five agencies which our report notes reported extramural research dollars to SBA rather than the required total research dollar obligation figure. In fiscal years 1983 and 1984, DOD reported to OMB total research dollar obligations of $22.9 billion and $26.4 billion, respectively; however, DOD reported $13.6 billion and $15.6 billion to SBA for these same years. As stated in DOD's comments and discussions with us, the figures that it reported to SBA (on which goals are based) constitute only contract awards made to U.S. business firms. As such, the figures represent extramural research dollars, not total research dollars as the law requires.

National Aeronautics and Space Administration

NASA said that compliance with our recommendation that agencies establish goals early and make them known to responsible officials would not result in a significant change. NASA noted that it spends considerable time establishing, monitoring, and achieving its other socioeconomic goals and thus is meeting the intent of Public Law 97-219.

The non-SBIR research goals established by Public Law 97-219 are separate and distinct from general small business funding goals required by other legislation. While the non-SBIR research goal is a subset of the more general goal, measuring achievement of either goal does not necessarily measure achievement of the other. As a result, we believe that the two goals need to be tracked separately. Given that NASA has already established a tracking system to monitor the general small business goals, we believe that NASA (or any agency) could add non-SBIR goals to its ongoing effort with minimal difficulty. In our opinion, it is appropriate that agencies do so. Such action would better enable NASA to plan and adjust its procurement actions so as to meet both goals.

Other comments

Three agencies--NSF, SI, and VA--said that an agency's extramural research budget would be a more appropriate base on which to establish non-SBIR goals than its total research budget, as the act now requires. SI and VA noted that although their total research budgets exceeded the $20 million dollar requirement, their extramural budgets (money available to go outside the agencies for research) have been so small that it is neither reasonable nor viable to set a percentage goal for small businesses. SI pointed out that its fiscal year 1983 extramural budget amounted to $43,000 or 7/100 of 1 percent of its total research dollar obligations. VA stated that while its fiscal year 1984 research budget exceeded $190 million, extramural expenditures totaled only $3.2 million. NSF said that basing goals on extramural dollars would be more helpful to agencies especially in regard to monitoring. While these arguments appear to have merit, the time allotted for this review did not permit us to fully assess all the potential advantages and disadvantages of basing goals on extramural dollars rather than total research dollars.

CHAPTER 4

PROGRAM COORDINATION AND MONITORING

The Small Business Innovation Development Act assigns the Small Business Administration and the Office of Science and Technology Policy similar responsibilities for surveying, monitoring, and reporting to the Congress on the operation of federal agencies' SBIR programs--responsibilities which the two agencies have approached differently. SBA has actively pursued these as well as certain other unshared program coordination responsibilities--preparing policy directives and various activities designed to maximize opportunities for small businesses' participation in SBIR programs. OSTP, on the other hand, has purposely limited its efforts because it believes that its assigned responsibilities are inappropriate and that further action could duplicate SBA's efforts.

SBA FULFILLED ITS LEGISLATIVELY MANDATED RESPONSIBILITIES

SBA fulfilled its legislatively mandated responsibilities during fiscal years 1983 and 1984--the first 2 years of SBIR program implementation. SBA's implementing actions included issuing policy directives to guide participating agencies, establishing a source file of and information program for interested small businesses, coordinating release of agency solicitation announcements, surveying and monitoring agencies' SBIR and non-SBIR goals activities, and providing the Congress with annual reports. We determined that SBA's policy directives addressed the criteria specified in the law and that, with minor exceptions, agencies used the directives. SBA's efforts to stimulate small business participation, to coordinate agency solicitations, and to oversee and report on program implementation have been extensive.

SBA's policy directives

The act requires SBA to seek comments on and issue policy directives for the general conduct of SBIR programs within 120 days of the law's enactment. The act specifies that the directives provide for a minimum of regulatory burden on participant small firms and that it provide participating agencies with simple, standard, and timely processes for (1) project solicitations, (2) proposal review and project selection and funding, and (3) annual SBIR program reports to SBA and OSTP. SBA also is to include any exemptions to its project review, selection, and funding policies that may be necessary to safeguard national security or intelligence functions.

SBA issued an initial policy directive addressing relevant provisions of the act within the 120-day statutory deadline, followed by a revised policy directive approximately 9 months later. Although the initial and revised policy directives were similar, they differed in the level of information agencies were required to report to SBA annually--a factor which some agencies said hampered their ability to report all required information in fiscal year 1983.

SBA published its initial policy directive (No. 65-01) in the Federal Register on November 24, 1982, approximately 120 days after the enactment of the legislation. Officials at the Office of Federal Procurement Policy, the Intergovernmental Affairs Division of the Office of Management and Budget, and the Office of Science and Technology Policy told us that SBA consulted with their agencies prior to issuing the initial directive, as the act requires. SBA issued a revised policy directive (SOP-65-01.1) to participating agencies in August 1983. A subsequent revision to the August directive became effective on September 30, 1984 (SOP 65-01.2). In addition, SBA issued several iterations of supplemental data reporting formats for agency use in reporting SBIR program results and for reporting achievement of non-SBIR goals. SBA issued the first of these reporting formats in December 1983--only a few weeks before its first established reporting deadline.

We found that the November 1982 and August 1983 policy directives covered all relevant provisions required by the act, but differed somewhat. The primary differences between directives were that the August 1983 policy directive required additional data on SBIR programs, and it added entirely new requirements for reporting data on achievement of non-SBIR goals. The additional data required for SBIR programs included the number of solicitations sent to small businesses, more detailed information on awardees, and categorization of awardees according to status (i.e., minority and disadvantaged-owned small businesses and women-owned small businesses[17]). The new requirements for information on achieving non-SBIR goals called for data such as total research funds going to small businesses and a disaggregation of such amount under the same status categories as required for SBIR programs.

While SBIR program managers for the most part found SBA's directives to provide adequate guidance, several non-SBIR program officials criticized the timing of SBA's requirements for reporting of fiscal year 1983 goals data. Several of these non-SBIR officials (as well as SBA's annual reports) noted that in some cases agencies could not report certain required data (such as research awards to women-owned small businesses) because they lacked systems to track such information. At least three agencies required to establish non-SBIR goals informed us that their reporting problems were due to insufficient time to set up a tracking system, resulting in part from late requirements imposed on them by SBA.

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[17] SBA required information in these categories to monitor attainment of socioeconomic goals of the Small Business Act.

During fiscal year 1984, SBA and the agencies made some progress in resolving other problem areas experienced with the reporting requirements in fiscal year 1983, such as the meaning of budgetary terms and how SBA intended that the agencies make certain calculations. In addition, the September 1984 revisions to SBA's policy directive clarified SBA's source of data for calculating agencies' extramural budgets.

SBA's source file and information program

The act requires SBA to develop and maintain a source file and information program to assure that each qualified and interested small business concern has the opportunity to participate in SBIR programs. SBA maintains such a file, a mailing list that contained approximately 30,000 names as of 1984, that was developed from high technology sources that SBA identified through its outreach efforts.

According to SBA's Acting Assistant Administrator for the Office of Innovation, Research and Technology (OIRT), many firms ask to be put on the mailing list after learning about SBIR programs through SBA's information program. A program analyst at OIRT compiled for us a list of 75 conferences and seminars (attended or sponsored by SBA) at which SBIR programs were discussed during fiscal years 1983 and 1984. Other information program activities during this period included preparing promotionals for television and radio shows, issuing press releases, and publishing (1) presolicitation announcements, (2) a document on phase I awardees, and (3) proposal preparation guidelines. SBA's fiscal year 1983 annual report to the Congress states that SBA had disseminated approximately 140,000 copies of an SBIR program information pamphlet (at conferences and through SBA's field offices), provided press releases to approximately 350 news outlets, and distributed 340,000 presolicitation announcements. SBA's fiscal year 1984 report stated that it disseminated approximately 140,000 information pamphlets, issued 3,000 press releases, and distributed over 200,000 presolicitation announcements during that fiscal year.

SBA also has made an effort to foster and encourage participation in SBIR programs by minority and disadvantaged persons in accordance with one of the act's stated purposes. During fiscal years 1983 and 1984, SBA sponsored or participated in five seminars designed to increase opportunities for minority and disadvantaged firms in technological innovation. In addition, SBA reports that over 10 percent of the source file is comprised of minority and disadvantaged firms. An OIRT official also told us that SBA is willing to assist agencies to improve their outreach programs and that it has specifically worked with DOE and NASA in this regard.

Coordination of solicitation announcements

The act requires SBA to coordinate the release of agency solicitations and to publish a master release schedule in order to maximize small businesses' opportunities to respond to agency solicitations. The act's legislative history indicates that the Congress did not intend SBA to establish actual schedules, but only to encourage agencies to stagger the times that their various solicitations are issued, which makes it easier for small businesses to submit SBIR proposals to more than one agency.

SBA complied with the law in its November 1982 policy directive, which established a process by which SBA releases announcements to provide small business with timely information about upcoming agency SBIR solicitations. Under procedures formalized in its August 1983 policy directive, SBA issues quarterly presolicitation announcements, with scheduled publication dates of September 20, December 20, March 20, and June 20 of each fiscal year. Each agency must schedule a solicitation release date with SBA which is at least 10 days after publication of the SBA presolicitation announcement containing the notice of the subject solicitation. SBA requires agencies to report their solicitation schedules by August 1 of each year and to provide information needed for SBA's presolicitation announcements--a list of research topics, an address from which interested firms may obtain solicitations, a contact person and address, opening and closing dates of each solicitation, and estimated number of awards to be made.

We found that SBA's coordination of agency release dates minimized "bunching" and that by fiscal year 1984 SBA was meeting its stated schedule for publishing a quarterly master release schedule. (SBA released seven presolicitation announcements in fiscal year 1983.) Agencies' release dates were staggered, and we found no release dates in fiscal year 1984 that were less than 10 days after publication of SBA's presolicitation announcements.

SBA's survey and monitoring actions have been thorough

SBA has actively pursued its legislatively mandated survey and monitoring responsibilities. SBA's activities in this regard cover four areas, as delineated in its policy directives: (1) oversight of SBIR funding allocations, (2) program solicitation and award status, (3) follow-on funding commitments, and (4) agency implementing regulations. We found that SBA pursued agencies' compliance with legislative requirements regarding expenditure of funds, worked with agencies to conform their solicitations to SBA's policy directive, and requires that agencies report data on follow-on funding commitments. The Acting Assistant Administrator for OIRT told us that his office also monitors proposed revisions to federal procurement regulations to identify possible conflicts with SBA's policy directive and that it had resolved all potential conflicts identified as of April 1985.

The act requires SBA to independently survey and monitor the operation of agencies' SBIR programs, but it does not specifically direct SBA to audit the agencies' SBIR funding figures. We found that SBA actively pursued its oversight duties, particularly in the area of monitoring agency SBIR funding in accordance with its interpretation of the law. In our opinion, SBA's monitoring efforts have been diligent.

We found that SBA took the initiative to notify agencies of the need to establish SBIR programs and/or non-SBIR goals based on its review of agencies' research or R&D budgets. (SBA's procedures for identifying agencies subject to the act are discussed in ch. 2.) As discussed earlier in this chapter, SBA prepared and revised guidelines to agencies for the reporting of funding data on SBIR programs and non-SBIR goals. It also attempted to obtain agency non-SBIR goals figures when they were not reported. We further noted that SBA officials met several times with agency program managers during fiscal years 1983 and 1984 to clarify SBA's policy directives and reporting formats and to resolve other issues, such as conflicts with the Freedom of Information Act.

Another area of SBA's oversight activity has been working with agencies to conform their SBIR solicitations to the format prescribed in SBA's policy directive. The Acting Assistant Administrator for OIRT told us that when his staff detects errors in an agency's solicitation they notify the agency in writing of the required revisions. We found that in fiscal year 1984, SBA contacted 10 agencies with SBIR provisions to point out minor revisions needed in their solicitations, such as correcting definitions, adding award amounts, and reorganizing section headings.

We found that SBA requested various types of data from agencies in its policy directives and its reporting formats in order to monitor their SBIR activities. Such data included solicitation release dates; proposal receipt dates; the number, amount, and timing of awards; and information on the awardees and their research topics. The Acting Assistant Administrator for OIRT told us that in, for example, monitoring award status, SBA is most concerned with determining whether phase I proposals are reviewed and awards made within 6 months of the date proposals are received by the agencies. This schedule was established to minimize the procurement process, and thereby provide proposers with prompt award decisions. In this regard, during fiscal year 1985 OIRT plans to begin performing onsite reviews of agencies' procedures for selecting awardees in order to determine whether they are in compliance with SBA's policy directive.

SBA's August 1983 policy directive states that SBA intends to monitor the extent to which agencies consider phase III, nonfederal funding commitments when making phase II awards, as required by the act. The September 1984 revision to the policy directive requires agencies to include information on phase II awardees with follow-on funding commitments in their annual reports to SBA. However, the Acting Assistant Administrator for OIRT told us that SBA would not begin to monitor this requirement until fiscal year 1985 because most agencies did not begin making phase II awards until fiscal year 1984.

SBA's fourth monitoring activity area is review of federal regulations to determine consistency with the SBIR act. The Acting Assistant Administrator for OIRT told us that SBA tracks proposed revisions to the Federal Acquisition Regulation (which applies to both civilian and defense agencies) to see if they will conflict with the SBA policy directive. As of April 1985 SBA had successfully resolved all potential conflicts that it had identified. In a related action, SBA recommended in September 1983 that its SBIR policy directive be included in the Federal Aquisition Regulation. The Civilian Agency Aquisition Council (which oversees changes to the Federal Aquisition Regulation) concurred with that recommendation in January 1985, but referred the matter to the Defense Aquisition Regulation Council for review prior to taking any formal action.

SBA's annual reports to the Congress have been informative

As the act requires, SBA submitted annual reports, covering fiscal years 1983 and 1984, to the Senate and House Committees on Small Business. The reports covered five broad areas: (1) a description of the act and related agency responsibilities, (2) SBA's implementation actions, (3) SBA's monitoring efforts related to SBIR programs, (4) technical aspects of the SBIR programs, and (5) SBA's general observations. The fiscal year 1984 report, moreover, added a section which highlighted the diversity of technology covered by SBIR solicitations and awards.

The report described SBA's source file, presolicitation announcements, information programs, and other coordinating duties. The fiscal year 1984 report also highlighted SBA's efforts to link successful SBIR projects to potential sources of private commercialization capital through a computerized data base (Commercialization Matching System). We noted that both reports also discussed SBA's outreach actions extensively.

Both SBA annual reports summarized funding data obtained from participating agencies, but the fiscal year 1984 report was more balanced in that it discussed disagreements between SBA and certain agencies as to the proper amount of their extramural and SBIR budgets. Similar disagreements existed in fiscal year 1983, but SBA did not thoroughly discuss them in its annual report. The fiscal year 1983 report also lacked balance in that it did not mention opinions expressed by at least three agencies that the lateness of SBA's guidance for reporting goals data hindered their ability to establish the tracking systems needed to compile certain required information.

Both SBA annual reports provided information regarding the technical aspects of SBIR programs. The fiscal year 1983 report focused on the opinions of selected agency officials (19 evaluation officials in 6 agencies) regarding the quality of SBIR proposals[18] compared with proposals funded through traditional federal R&D programs. The majority believed that SBIR proposals provided more innovative, creative solutions to agency problems and a clearer path to fulfilling a need in the marketplace. The fiscal year 1984 report also focused on the results of SBA's review of all SBIR technical abstracts and its visits to selected phase I awardees. SBA found that most, but not all, of phase I awardees were participating as intended by the act.

OSTP'S RESPONSE TO ITS LEGISLATIVELY MANDATED DUTIES HAS BEEN LIMITED

The act requires the Office of Science and Technology Policy to independently survey, monitor, and report to the Congress on all phases of the operation and implementation of SBIR programs. OSTP complied with the surveying, monitoring and reporting requirements in the act, but it purposely limited its efforts and did not assess research quality as envisioned in the reports issued by the House and Senate Small Business Committees. OSTP minimized its efforts for two reasons--a desire to avoid duplication of what OSTP believes are adequate monitoring efforts by SBA, and a belief that the required duties are inappropriate and impractical given OSTP's mission and its limited staff resources.

The act requires the Director of OSTP, in consultation with the Federal Coordinating Council for Science, Engineering and Research (FCCSER), (in addition to reviewing SBA's policy directives) to

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[18] As discussed in the next section, evaluating the quality of SBIR research is more closely aligned with the oversight responsibilities that the Congress envisioned for OSTP; however, OSTP has yet to address this topic.

--independently survey and monitor all phases of the implementation and operation of participating agencies' SBIR programs, including the expenditures of funds[19] and

--annually report to the Congress on all phases of implementation and operation of SBIR programs, including recommendations as deemed appropriate.

Both OSTP and SBA share responsibilities for surveying and monitoring the operation of SBIR programs and for reporting annually to the Congress.

According to OSTP's Senior Policy Analyst responsible for overseeing SBIR programs, the Director has not yet discussed OSTP's SBIR program oversight responsibilities at FCCSER meetings, which are held occasionally to discuss research issues in the President's budget. FCCSER, established by OSTP's enabling legislation[20] in 1976, is to advise and assist the Director regarding problems and developments in the fields of science, engineering, technology, and related activities that affect more than one federal agency. OSTP's Director is Chairman of FCCSER, which is now comprised of federal R&D agency officials designated by the Chairman.

OSTP's survey, monitoring, and reporting actions during the first 2 years of the program have been limited. OSTP's actions consisted of (1) staff attending several initial meetings of agency SBIR program managers sponsored by SBA, (2) reviewing the type of information that agencies planned to include in their first annual reports to OSTP in order to determine the information's sufficiency for OSTP's needs, (3) reviewing agencies' and SBA's annual reports to ensure that agencies were complying with the act's mandatory funding provisions, and (4) occasional talks with agency officials regarding progress in soliciting proposals and making awards.

OSTP issued its first annual (fiscal year 1983) report to the House and Senate Small Business Committees on July 9, 1984. The one-page letter report stated little support for its conclusions: that all 11 agencies with programs were making "good faith" efforts to accomplish the purposes of the act and that SBA was satisfactorily fulfilling its oversight responsibilities. The report noted that OSTP relied primarily on a review of agencies' and SBA's annual reports on SBIR program activities to arrive at its conclusions. However, when questioned about the extent of this review, the Senior Policy Analyst in charge of writing the OSTP annual report told us that while he looked over the agencies' and SBA's annual reports prior to preparing the OSTP letter report, he did not systematically review the reports nor did he attempt to compare data that agencies submitted to SBA with data that SBA reported. The official was not aware of the disagreements over budget figures between SBA and several agencies (see ch. 2) until we brought them to his attention. The analyst plans to prepare a similar annual report for fiscal year 1984, which probably will be issued in October 1985.

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[19] The act specifies "expenditures of funds according to the requirements of subsection (f)." The cited subsection establishes requirements for determining which agencies are required to establish SBIR programs and for computing the annual amounts the agencies must spend through these programs.

[20] Public Law 94-282, the "National Science and Technology Policy, Organization, and Priorities Act of 1976," established OSTP and the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET), which was later referred to as FCCSER in Public Law 97-219.

OSTP concluded its fiscal year 1983 annual report with a recommendation that the Congress continue to assure itself that awards under agency SBIR programs meet the standards of excellence employed for regular agency R&D support, but did not indicate how this should be accomplished. According to the Senior Policy Analyst, OSTP does not view itself as the proper office to survey the quality of SBIR research. Rather, he said that OSTP believes the best way to assure the quality of SBIR awards would be to eliminate the law's mandatory funding provisions and have all research proposals (SBIR and non-SBIR) compete equally through a peer review process. Moreover, he said that OSTP maintains that the real issue needing attention is not how well SBIR programs are being implemented, but rather why innovative small firms are precluded from traditional federal research funding. The OSTP Director has proposed to the White House Science Council (OSTP's advisory council) that OSTP study this question. As of September 1985 the Council was awaiting additional information from OSTP before deciding whether or not to endorse such a study.

The Senior Policy Analyst gave two reasons for OSTP's limited efforts to oversee and report on SBIR programs in participating agencies. First, OSTP wants to avoid duplicating SBA, and thereby minimize the regulatory burden of compliance placed on affected agencies and participating companies. OSTP views SBIR program monitoring as SBA's job and believes that SBA is doing that job satisfactorily.

Second, OSTP does not believe that the assigned SBIR responsibilities are practical or appropriate for OSTP given its limited staff resources and its primary role as technical advisory office to the President. OSTP sees its mission as setting general policy for federal research and looking at alternative research mechanisms--not advocating one specific mechanism such as SBIR. The Senior Analyst noted that SBA and the small business community have a vested interest in seeing that agencies comply with the act's funding provisions and that their monitoring should ensure such compliance without OSTP's efforts.

Both OSTP and SBA share the same responsibility to survey, monitor, and report on the operation of SBIR programs. However, the act's legislative history, as evidenced by the reports of the authorizing committees, indicates that the Congress expected OSTP's primary responsibility to be ensuring the quality of federal research, while SBA was to protect the interests of small businesses.

We find nothing in OSTP's enabling legislation which would conflict with its SBIR monitoring duties, particularly overseeing the quality of research conducted under these programs. OSTP's enabling legislation gives it broad authority to advise the President on major scientific and technological policy issues, including federal programs, policies, and activities affecting technological innovation. More specifically, the law directs OSTP to evaluate the scale, quality, and effectiveness of federal efforts in science and technology and to assist OMB to review and analyze agencies' proposed R&D budgets.

Testifying on proposed SBIR legislation before the House Committee on Science and Technology in January 1982, OSTP's Assistant Director said that his office has specific responsibility for assuring the quality and balance of federal science programs and the expertise and coordinating mechanism necessary to meet SBIR surveying and reporting responsibilities. He also testified that the Federal Coordinating Council for Science, Engineering, and Technology[21] would be the principal mechanism through which the OSTP Director would assure the quality and effectiveness of SBIR programs. In response to formal questions submitted to him by the Committee, the Assistant Director noted that a FCCSET committee,[22] comprised of participating agency officials, would be the mechanism to effectively coordinate OSTP's oversight responsibilities under SBIR legislation without the commitment of significant OSTP resources.

CONCLUSIONS

Although SBA and OSTP share similar survey, monitoring, and annual reporting responsibilities under the SBIR law, they approached their respective oversight duties differently during fiscal years 1983 and 1984--the first 2 years of the SBIR program implementation. SBA actively pursued its survey and monitoring duties and provided the Congress with informative annual reports. Although OSTP did survey and monitor agency reports and did report to Congress, it purposely limited its efforts because of a desire to avoid unnecessary duplication of what it considered as adequate efforts on the part of SBA and to avoid efforts that it believes are inappropriate and impractical given its mission and limited staff resources.

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[21] Later referred to as the Federal Coordinating Council for Science, Engineering and Research in Public Law 97-219.

[22] According to Public Law 94-282, federal agencies represented on FCCSET shall detail employees to FCCSET to perform duties assigned to them by the Chairman, such as conducting studies and making reports.

Although the act does not specify how OSTP and SBA are to fulfill their respective duties, the legislative history indicates the Congress' desire that OSTP ensure the quality of SBIR research and development, while SBA is to protect the interests of small businesses. OSTP has the authority and means to make additional, nonduplicative efforts to survey and monitor agencies' SBIR programs if it so desires, particularly the quality of research. This clearly was the expectation of the authorizing committees. While we did not seek to determine specifically how OSTP could best ensure the quality of SBIR research, one option would be for OSTP to serve as general overseer of the individual agencies' quality assurance efforts. As such, OSTP could set general policy guidelines and monitor agencies' adherence to them.

RECOMMENDATION TO THE DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY POLICY

We recommend that OSTP expand its oversight of agencies' SBIR programs by using the Federal Coordinating Council for Science, Engineering and Research to monitor the SBIR programs in terms of research quality.

AGENCY COMMENTS AND GAO RESPONSE

In its comments on a draft of this report, OSTP said that agencies are responsible for the quality of their own research and that it would not be appropriate or practical for OSTP to continuously monitor agency performance in this area. While we agree that agencies should bear responsibility for the quality of their own research, the Small Business Committees expected that OSTP play a role in ensuring that agencies carry out that responsibility with regard to SBIR research. We believe our report demonstrates that such a role is appropriate to OSTP's mission and that OSTP has a practical means to increase its efforts in this regard by using the Federal Coordinating Council for Science, Engineering and Research.

Table I.1:
AGENCY ACTIONS UNDER SBIR PROGRAM REQUIREMENTS

Agency	No. of solicitations released		Total No.[a] of topics in solicitation(s)		No. of Phase I proposals received		No. of SBIR awards made				Agency submitted annual report to SBA and OSTP	
							FY83		FY84			
	FY83	FY84	FY83	FY84	FY83	FY84	Phase I	Phase II	Phase I	Phase II	FY83	FY84
USDA	1	1	6	6	274	328	16	0	16	7	Yes	Yes
DOD	1	1	177	566	2,902	3,010	281	0[b]	368	151[b]	Yes	Yes
ED	1	1	4	5	84	234	8	0	13	3	Yes	Yes
DOE	1	1	25	25	1,734	844	106	0	101	51	Yes	Yes
HHS	2	4	324	979	792	921	139	0	226	56	Yes	Yes
DOI	1	1	12	14	105	110	6	0	13	2	Yes	Yes
DOT	1	1	6	6	372	366	6	0	17	3	Yes	Yes
EPA	1	1	12	12	214	136	10	0	10	5	Yes	Yes
NRC	1	1	4	4	172	110	7	0	6	4	Yes	Yes
NASA	1	1	26	15	977	919	1[c]	0	102[d]	0[d]	Yes	Yes
NSF	1	1	18	18	1,186	977	5[e]	41[e]	102[e]	53[e]	Yes	Yes
DOC	(f)	0	(f)	0	(f)	0	(f)	(f)	0	0	(f)	No

[a] These figures relate to the major topic areas in agencies' solicitations, not the number of subtopic areas.

[b] Excludes the awards made under DOD's Defense Small Business Advanced Technology (DESAT) Program which are credited against DOD's SBIR program funding requirement. (The DESAT program, a forerunner of SBIR, is discussed in ch. 1.)

[c] Total of 102 awards resulted from NASA's FY 1983 solicitation, but due to timing of contracts, almost all awards were made in early FY 1984.

[d] These awards resulted from NASA's FY 1983 solicitation. In early FY 1985, NASA made 127 Phase I awards from its FY 1984 solicitation. NASA also made 58 Phase II awards in FY 1985.

[e] All awards made in FY 1983 and FY 1984 resulted from prior years' solicitations from NSF's SBIR program.

[f] DOC was not required to establish an SBIR program in FY 1983.

Because DOC's fiscal year 1984 estimated extramural obligations (as reported to NSF between March and August of 1983) did not exceed $100 million, SBA did not identify DOC at the beginning of fiscal year 1984 as meeting the criterion requiring establishment of an SBIR program. However, DOC's revised estimate of its fiscal year 1984 extramural obligations, which it submitted to NSF in March 1984, did exceed the $100 million mark. Consequently, in April 1984 when SBA reviewed DOC's revised fiscal year 1984 estimate, it found that DOC did meet the criterion requiring establishment of an SBIR program and informed DOC of this fact. DOC informed SBA in June 1984 that it was preparing to establish an SBIR program. However, DOC did not have enough time to issue a solicitation, receive and evaluate proposals, and make awards before the end of the fiscal year. DOC issued its first SBIR solicitation on October 15, 1984, 2 weeks after the close of fiscal year 1984. DOC has informed SBA that it plans to make up the amount it should have awarded under its fiscal year 1984 SBIR program during fiscal year 1985.

Table II.1:

AGENCIES' ADHERENCE TO INFORMATION REQUIREMENTS FOR SBIR SOLICITATIONS, FISCAL YEARS 1983 AND 1984

Agency issuing solicitation	Required Sections in Solicitation																	
	Program description		Definitions		Proposal preparation		Method of selection evaluation		Considerations		Proposal submission		Technical[a] information sources		Research topics		All sections	
	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84	FY83	FY84
USDA	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1
DOD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DOE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ED	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1
DOI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DOT	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1
EPA	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1	1
NASA	1	1	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1	1
NRC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NSF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HHS[b]																		
-PHS	1		1		2[c]		1		1		1		3		1		1	
-Services Research	1		1		1		1		1		1		3		1		1	
-PHS#1		1		1		1		1		1		1		3		1		1
-PHS#2		1		1		1		1		1		1		3		1		1
-HCFA		1		1		1		1		1		1		3		1		1
-OHDS		1		1		1		1		1		1		1		1		1

1: As determined by GAO, meets 50% or more of content requirements of section
2: As determined by GAO, meets less than 50% of content requirements of section
3: Not applicable

[a] This section is only required when descriptions of research topics or subtopics include reference to publications.

[b] HHS has opted to let its component agencies issue separate SBIR solicitations.

[c] Although this solicitation did not contain proposal preparation instructions, it stated that proposers must request a Public Health Service grant application kit which contains supplementary instructions for preparing SBIR grant applications.

INFORMATION REQUIRED BY SBA IN

ANNUAL AGENCY SBIR REPORTS

1. Extramural R&D budget for subject fiscal year.

2. SBIR budget for subject fiscal year (derived by applying statutory percentage to extramural R&D budget).

3. SBIR dollars awarded (phases I and II).

4. Various statistics on the solicitation(s) released during the fiscal year.

5. Number of proposals received (phase I).

6. Total number and dollar amount of awards (phases I and II).

7. Narrative descriptions of phase I and phase II awards.

With very minor technical exceptions, all agencies' fiscal years 1983 and 1984 annual reports were on time and included the information regarding SBIR programs requested in SBA's annual reporting form. As discussed in chapter 2, however, agencies used different, and sometimes inappropriate, bases for computing their reported figures on extramural budgets, required SBIR funding levels, and actual SBIR funding levels. Problems with the accuracy and appropriateness of data which the agencies reported in connection with non-SBIR goals are discussed in chapter 3.

ADVANCE COMMENTS FROM THE SMALL BUSINESS ADMINISTRATION

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF THE ADMINISTRATOR

JUL 30 1985

J. Dexter Peach, Director
Resources Community and Economic
Development Division
U. S. General Accounting Office
414 G Street, N. W.
Washington, D. C. 20548

Dear Mr. Peach:

We have reviewed in detail your proposed report number GAO/RCED-85-123 and our comments are as follows:

I. General Comments:

Now on p. 4.

1. Page 6, top of page. While $69 million of SBIR funds addressed the Computer/Information Processing/Analysis area, in FY 83 and 84 this figure might be misinterpreted if inaccurately compared to the $156 million in total awards for the first two fiscal years. The $69 million is an inflated amount resulting from our convention of counting SBIR awards in as many technologies as are applicable. The $69 million results from adding the columns in Exhibit 4.7 of our Second Annual Report, where the true correct total for comparison can be calculated as $323 million. We suggest either dropping the sentence or clarifying its meaning.

Now on pp. 9, 49, and 62.

2. Page 12 footnote 5 - pages 58 and 62. The GAO draft, in several areas, makes the statement that the SBA issued a draft policy directive in November 1982 and a final version in August 1983. This statement by GAO is incorrect. The SBA published its Policy Directive in final form on November 22, 1982. Since that initial release there have been two separate published revisions. Prior to the initial publication the SBA circulated a draft policy directive for agency comment and after release, although not legally bound to do so, published the Policy Directive in the Federal Register for public comment.

ADVANCE COMMENTS FROM THE SMALL BUSINESS ADMINISTRATION

Now on p. 20.

3. Page 24, second paragraph, second to the last sentence. The sentence as written may lead the reader to an incorrect conclusion. As you have stated, the FY 84 Annual Report as of this date is not published. The reason for this is that the Government Printing Office has had our documents for printing for over sixteen weeks and we still do not have a firm printing date. Our Annual Report was completed in late February. We do not want to give the incorrect impression that we have been working on the report during this period.

Now on p. 37.

See comment 1.

4. Page 46, second paragraph. The non-SBIR goal is in fact a basic procurement R&D goal for small business. All of the involved Federal agencies have been negotiating and reporting to the SBA prime and subcontracting majority and minority goals since the passage of PL 95-507 in 1978. Under PL 97-219 the Congress merely added a non-negotiable R&D small business goal. It is unreasonable to suggest that the SBA should provide agencies with "criteria" and "guidance" on how to set and achieve such a goal. It is unquestionable that the agencies have a wealth of experience and talent to apply to setting the non-SBIR goal and the procedures for its attainment.

Now on p. 44.

5. Page 55, first paragraph. The recommendation to Congress concerning non-SBIR goal procedures is not a problem of sufficient magnitude to warrant an amendment to the Small Business Innovation Development Act. It is the opinion of the SBA that an administrative expansion of the Policy Directive could fairly resolve any questions or concerns in this area.

Now on p. 51.

6. Page 60 "SBA's Source file and information program," second sentence. The SBIR mailing list was not developed from the Procurement Automated Source System (PASS). The two systems are separate and distinct. The SBIR computerized mailing list was developed from new high technology sources through our outreach efforts.

Now on p. 52.

7. Page 62, first paragraph, first sentence. During the first year of the program, and in the initial Policy Directive, (11/82) The Pre-solicitation Announcement concept was referred to as the master release schedule. During FY 83 six announcements were made. In the revised Policy Directive, August 1983, the master release schedule name was changed to the Pre-Solicitation Announcement and the procedure was formalized. The SBA met its legal obligation on November 22, 1982.

ADVANCE COMMENTS FROM THE SMALL BUSINESS ADMINISTRATION

Now on p. 53.

8. Page 64, first paragraph, second to the last sentence. The referenced six months time frame was established to minimize the procurement process and thereby gain an award decision for the proposers in as timely a fashion as possible. It was not done to give the opportunity for companies to resubmit to other agencies.

   In fact the Policy Directive allows concerns to submit the same proposal to different agencies if they inform the agency of the multiple submittal.

Now on p. 55.

9. Page 66, second paragraph, third sentence. It is not accurate to say that, "The majority believed that SBIR proposals were of higher quality." Rather the majority found: (1) more clarity in projecting a path from the R&D effort to filling a need in the marketplace, and (2) more innovative, creative solutions to agency problems.

Now on pp. 30, 44-45, and 59.

II. GAO Recommendations (pages 37-38 and 55-56):

The Small Business Administration generally concurs with the proposed administrative recommendations of the GAO to the SBA. In the specific case of the DOD recommendation we do not understand the GAO reasoning and consequently do not concur. It is and has been our position that the law set forth the definition and elements of extramural budgets and the SBA accordingly implemented a reasonable extramural budget determination approach. Neither the law nor legislative history suggests or states that the agencies can self adjust or negotiate their extramural budgets with the SBA. We accordingly do not concur with the recommendation because the decision to follow the law and the policy directive is within the management and policy prerogative of DOD.

We appreciate the opportunity to comment on the report and if you need further information, please advise.

Sincerely,

Robert A. Turnbull

for James C. Sanders
Administrator

ADVANCE COMMENTS FROM THE SMALL BUSINESS ADMINISTRATION

The following are GAO's comments on the Small Business Administration's letter dated July 30, 1985.

GAO COMMENTS

1. Our purpose was not to criticize SBA for not providing agencies with criteria or guidance. Rather, our purpose was to establish the lack of criteria for evaluating non-SBIR goals activities and thus explain why we used our own criteria. We nevertheless clarified this paragraph accordingly.

ADVANCE COMMENTS FROM THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
WASHINGTON, D.C. 20506

July 9, 1985

Dear Mr. Peach:

Thank you for providing us with draft copies of the GAO report on the first two years of implementation of the Small Business Innovation Development Act. I have two comments:

Now on p. iv.

On page (iv) of the Executive Summary, the report recommends that OSTP increase its oversight efforts by devoting more attention to the quality of the research. I strongly agree that the quality of the research funded under the various SBIR programs is of fundamental importance. However, the agencies are responsible for the quality of their own research, and our system of government has many regular procedures for ensuring adequate performance on government programs. I do not believe that it is appropriate or practical for OSTP to continuously monitor agency performance in this one area.

Now on pp. 55 and 57.

See comment 1.

On page 67, and in more detail on page 70, the Report cites an OSTP concern that an active oversight role with respect to the SBIR program might be perceived as biased (p.67 line 4) or result in a conflict of interest (p.70 line 17). The language in both places could be interpreted to imply a reluctance on the part of OSTP to support the legislation. While OSTP has gone on record as opposing mandatory funding provisions, the Small Business Innovation Development Act is the law, and we fully support it. OSTP staff did discuss our philosophical dislike for "set-aside" programs. At no time in their discussions with the GAO investigators did they suggest that this was a reason for withholding OSTP efforts in fulfilling the requirements of the Act.

Yours truly,

John P. McTague
Deputy Director

Mr. J. Dexter Peach
Director
U.S. General Accounting Office
Washington, D.C. 20548

ADVANCE COMMENTS FROM THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

The following are GAO's comments on the Office of Science and Technology Policy's letter dated July 9, 1985.

GAO COMMENTS

1. While we maintain that the OSTP staff member suggested this to us as a reason for OSTP's limited oversight role, we deleted it from the final report because it obviously does not reflect an official agency view.

ADVANCE COMMENTS FROM THE OFFICE OF MANAGEMENT AND BUDGET

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

July 25, 1985

Mr. William J. Anderson
Director, General Government
Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

The Director asked me to review and comment on the GAO draft report on the first 2 years of Federal agencies' implementation of the Small Business Innovation Development Act of 1982 (Public Law 97-219).

The draft report was reviewed by interested offices within the Office of Management and Budget and we have no comments to report to you.

Thank you for giving us the opportunity to review the draft report.

Sincerely,

Joyce J. Walker

Joyce J. Walker
Deputy Associate Director
Transportation, Commerce
and Housing Division

ADVANCE COMMENTS FROM THE DEPARTMENT OF AGRICULTURE

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

JUL 29 1985

SUBJECT: GAO Draft Report RCED-85-123 Dated June 26, 1985, Entitled "Implementing the Small Business Innovation Development Act - The First 2 Years"

TO: J. Dexter Peach, Director
Resources, Community and Economic Development Division
U. S. General Accounting Office

The draft report has been reviewed by appropriate officials with their comments provided.

While the report is one of examining two functions defined by the Act, anyone reading the report may not separate these functions, which are: 1) research grants, and 2) contracts. The report, then, should be read regarding the Small Business Innovation Research (SBIR) actions and non-SBIR responsibilities.

Now on p. 21.

The Department of Agriculture was in noncompliance of funding provisions in 1983, where as 0.2 percent of extramural obligations was to be the total award figure, only 0.192 percent of extramural obligations were awarded. This was corrected in Fiscal Year 1984, where 0.6 percent was mandated and exceeded (unnumbered table page 26). It is expected that the legislated 1.0 percent will be awarded in Fiscal Year 1985.

Now on pp. 34-37.
Now on pp. 37-39.

Non-SBIR compliances with the reporting regulations were difficult to establish due to the separate functions of research grant award process and the setting of goals responding to the Act. The confusion in what to report is explained in the narrative (page 43-46). Those conducting the SBIR research are not privy to the data required by the non-SBIR reports. The recommendations stated on page 47 should be examined. The chart on page 48 is indicative of the problem.

Now on pp. 44-45.

It is interesting to note that the recommendations directed toward USDA refer to non-SBIR goals data (page 55). Now that a person has been named to account for non-SBIR goaling, that issue should be resolved.

Thank you for the opportunity to comment on this report.

Orville G. Bentley
ORVILLE G. BENTLEY
Assistant Secretary
Science and Education

ADVANCE COMMENTS FROM THE DEPARTMENT OF COMMERCE

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D.C. 20230

AUG 14 1985

Mr. J. Dexter Peach
Director, Resources, Community, and
  Economic Development Division
United States General
  Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

This is in reply to GAO's letter of June 26, 1985, requesting comments on the draft report entitled "Implementing the Small Business Innovation Development Act -- The First 2 Years."

We have reviewed the enclosed comments of the Assistant Secretary for Productivity, Technology, and Innovation and believe they are responsive to the matters discussed in the report.

Sincerely,

Kay Bulow

Kay Bulow
Assistant Secretary
  for Administration

Enclosure

ADVANCE COMMENTS FROM THE DEPARTMENT OF COMMERCE

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Productivity,
Technology and Innovation
Washington, D.C. 20230
(202) 377-1984

AUG 9 1985

Mr. J. Dexter Peach
Director, Resources, Community
and Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for you letter to Secretary Baldrige requesting Department of Commerce views on the draft GAO report regarding the first two years of Federal agencies' implementation of the Small Business Innovation Development Act of 1982 (Public Law 97-219).

The Department considers this draft report to be a sound analysis of the progress to date in implementing P.L. 97-219.

I would only add, for emphasis, that it is particularly important for agencies to meet their non-Small Business Innovation Research (SBIR) goals (as discussed in the report beginning on page 46), since the purpose of the program is not to replace other sources of capital for small innovative businesses, but to augment those sources.

Now on p. 37.

We appreciate this opportunity to comment.

Sincerely,

D. Bruce Merrifield

ADVANCE COMMENTS FROM THE DEPARTMENT OF DEFENSE

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

THE UNDER SECRETARY OF DEFENSE
WASHINGTON, DC 20301-3010

RESEARCH AND ENGINEERING

8 AUG 1985

Mr. Frank C. Conahan
Director, National Security and
International Affairs Division
General Accounting Office
441 G Street, N.W.
Washington, D. C. 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office Draft Report, "Implementing the Small Business Innovation Development Act -- The First 2 Years," June 27, 1985, (GAO Code 005707), OSD Case No. 6790.

The DoD agrees with the content of this report, and wishes to compliment the working members of your staff who were most cooperative and willing to consider our positions and our recommendations during their study.

Responses to those recommendations in the draft report applicable to the DoD are enclosed. We specifically want to call your attention to our response to Recommendation 3. We have included several comments on our disagreement with SBA and would welcome any views you may wish to include in this report on this question.

Sincerely,

DONALD A. HICKS

Enclosure

ADVANCE COMMENTS FROM THE DEPARTMENT OF DEFENSE

DoD Responses to Recommendations in GAO Draft Report

(1) RECOMMENDATION TO THE HEADS OF AGENCIES WITH SBIR PROGRAMS (INCLUDES DoD): To permit proper determination of compliance with the funding provisions of the Small Business Innovation Development Act of 1982, GAO recommended that the heads of appropriate agencies with SBIR programs report actual fiscal year extramural R&D obligations (not estimates) to the Small Business Administration (SBA). (p. 37, GAO Draft Report)

Now on p. 30.

See comment 1.

DoD Response: Concur. The DoD reports to SBA have all contained actual obligations.

(2) RECOMMENDATIONS TO HEADS OF AGENCIES REQUIRED TO ESTABLISH NON-SBIR GOALS: GAO recommended that the heads of applicable agencies subject to the non-SBIR goals provisions of the Small Business Innovation Development Act of 1982:

a. Reassess their respective agencies (includes DoD) reports to OMB and SBA for fiscal years 1983 and 1984, make them consistent, and instruct the appropriate officials to take steps to ensure consistency of these reports in the future.

b. After reviewing OMB and SBA reports, provide SBA with revised non-SBIR goals data where necessary.

c. Instruct the appropriate officials in their respective agencies to establish goals early in the fiscal year and make such goals known to officials responsible for awarding external R&D funds. (p. 5, GAO Draft Report)

Now on pp. 44-45.

DoD Response: Concur. The DoD reports for fiscal years 1983 and 1984 are consistent with our method of reporting since the beginning of the DoD Small Business Program. Reports of accomplishments are based on contract awards made to U.S. business firms for work performed in the U.S. Future reports will be made in the same manner. Accordingly, we have no revisions to furnish SBA. With regard to the establishment of goals early in the fiscal year and their transmittal to operating officials, the DoD has for many years established goals for awards to small and to small disadvantaged business firms. Interim goals are always assigned prior to the beginning of the fiscal year to all major DoD components, with final goals superseding the interim goals as soon as possible after final fiscal year award statistics become available.

ADVANCE COMMENTS FROM THE DEPARTMENT OF DEFENSE

Usually the final goals are in place by the end of December. Our R&D goals will be computed and assigned in conjunction with our established goaling procedures, which complies with the GAO recommendation.

(3) RECOMMENDATION TO THE ADMINISTRATOR, SMALL BUSINESS ADMINISTRATION AND TO THE SECRETARY OF DEFENSE: GAO recommended that the Administrator, SBA, and the Secretary of Defense reach agreement as to whether the Operational Systems Development category of DoD's Research, Development, Testing and Evaluation appropriations should be included in DoD's extramural budget for purposes of the Small Business Innovation Development Act of 1982. In keeping with the Comptroller General's decision in a previous similar situation, the officials should be guided by the principle that the nature of the activities being funded (rather than labels applied to appropriations) is the proper basis for determining the required amount of agencies' extramural R&D budgets for purposes of the act. Should the Administrator and the Secretary be unable to resolve the subject disagreements, they should ask the Comptroller General for a formal decision. (p. 37, GAO Draft Report)

Now on p. 30.

DoD Response: Concur. We have re-examined, very carefully, the definitions of "Research" and "Extramural Budget" in the Act and the legislative history, and have reaffirmed our conclusion that the requirements funded under the 6.6 program element are not included. In so doing, we have taken into account the GAO decision in the NASA case, which we believe is consistent with our conclusion that the nature of the requirements being funded, not the labels attached thereto, governs.

With regard to the disagreement between DoD and SBA on this matter, we believe that under the Act, the DoD has the responsibility to decide the makeup of its extramural budget. However, we will continue to work with SBA to resolve the concerns. In this regard, we would welcome any views the GAO may wish to include in its report on this question.

(4) RECOMMENDATIONS TO THE ADMINISTRATOR, SMALL BUSINESS ADMINISTRATION: GAO recommended that the Administrator:

a. Revise SBA's policy directive containing reporting requirements for SBIR program data to require agencies to report "extramural R&D obligations" rather than "extramural R&D budget authority."

ADVANCE COMMENTS FROM THE

DEPARTMENT OF DEFENSE

b. Revise the deadline for agencies' reporting of this data to March 1 of each year, the deadline for agencies reporting the same data to the National Science Foundation.

c. Recompute agencies' non-SBIR goals using revised data for fiscal years 1983 and 1984 that agencies provide to SBA after reviewing previously submitted data for consistency with data reported to OMB. SBA also should use the recomputed fiscal year 1983 goals as the baseline data against which to evaluate goal achievement in subsequent fiscal years.

d. Change the due date for agencies' submission of non-SBIR goal reports to the end of January to coincide with agencies' budget submissions to OMB.

e. Revise SBA's policy directive containing reporting requirements for non-SBIR goals to require agencies to report "total R, R&D dollar obligations" rather than "total R, R&D budget authority." (pp. 37 and 55, GAO Draft Report)

Now on pp. 30 and 45.

DoD Response: Concur.

(5) MATTER FOR CONSIDERATION BY THE CONGRESS: Congress should consider amending section 4 of the Small Business Innovation Development Act of 1982 to clarify application of the criterion for determining which agencies must establish non-SBIR goals for research funding agreements with small businesses. Specifically, the Congress should consider resolving the ambiguity by making clear that whether an agency needs to establish goals should be determined annually by applying the stated criterion. (p. 55, GAO Draft Report)

Now on p. 44.

DoD Response: Concur.

ADVANCE COMMENTS FROM THE DEPARTMENT OF DEFENSE

The following are GAO's comments on the Department of Defense's letter dated August 8, 1985.

GAO COMMENTS

1. As noted in chapter 2, DOD has reported extramural *appropriations*, not actual obligations, to SBA.

ADVANCE COMMENTS FROM THE DEPARTMENT OF EDUCATION

UNITED STATES DEPARTMENT OF EDUCATION
WASHINGTON, D.C. 20202

JUL 26 1985

DEPUTY UNDER SECRETARY

Richard L. Fogel, Director
Human Resources Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Fogel:

The Secretary has asked me to respond to your letter of June 26 transmitting GAO's draft report on implementation of the Small Business Innovation Development Act.

Now on p. 21.

Our SBIR coordinator reports that the data for the Department of Education contained in the table on page 26 of the report are incorrect. The ED figure in the column headed "SBIR dollars awarded reported to SBA" should be 693.7, not 972.3. In addition, the figure in the column headed "Actual allocation percentage" should be .620, not .869. The reason for the difference is that we fund Phase II projects incrementally. For example, while an award may officially be for $200,000, the amount of dollars we put into the project for the reporting year may only be $100,000. Therefore, $100,000 should be the only figure reported. The required SBA form does not allow for this difference.

Thank you for the opportunity to comment on the draft.

Sincerely,

William H.

for Linda M. Combs
Deputy Under Secretary
for Management

ADVANCE COMMENTS FROM THE DEPARTMENT OF ENERGY

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

Department of Energy
Washington, D.C. 20585

JUL 26 1985

Mr. J. Dexter Peach
Director, Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

The Department of Energy (DOE) appreciates the opportunity to review and comment on the General Accounting Office (GAO) draft report entitled "Implementing The Small Business Innovation Development Act--The First 2 Years."

DOE considers the report to be generally factual and accurate and, accordingly, offers no comments.

Sincerely,

Martha Hesse Dolan
Assistant Secretary
Management and Administration

ADVANCE COMMENTS FROM THE DEPARTMENT OF ENERGY

Department of Energy
Washington, D.C. 20585

JUL 26 1985

Mr. Mark Nadel
Resources, Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Nadel:

In response to Mr. J. Dexter Peach's request of June 26, 1985, the Department of Energy's formal response to the General Accounting Office (GAO) request for comments on the draft report entitled "Implementing The Small Business Innovation Development Act--The First 2 Years" is being submitted by separate letter to the GAO.

An editorial comment on the report is enclosed for GAO's consideration in preparing the final report.

Sincerely,

MHDolan

Martha Hesse Dolan
Assistant Secretary
Management and Administration

Enclosure:
Editorial Comment

ADVANCE COMMENTS FROM THE DEPARTMENT OF ENERGY

Editorial Comment on the GAO Draft Report "Implementing The Small Business Innovation Development Act--The First 2 Years" (GAO/RCED-85-123).

Now on p. 21.

page 26 - "No" in column 6, line 3 of the table.

Comment - We suggest that the answer to the question "Did Agency comply?" [with legislated SBIR funding requirements in FY 1983] should be changed to a "Yes", with a clarifying footnote. The Department believes that the answer "No" is misleading because the procedures adapted by the Department insured that any minor underspending in FY 1983 was rectified by spending in FY 1984 the necessary additional amount to comply with the legislatively mandated funding requirements. We suggest that the footnote to accompany the "Yes" response read as follows:

> The minor underage reported for FY 1983 was covered by increased awards in FY 1984.

See comment 1.

ADVANCE COMMENTS FROM THE DEPARTMENT OF ENERGY

The following are GAO's comments on the Department of Energy's letter dated July 26, 1985.

GAO COMMENTS

1. As discussed in chapter 2, compliance with the prescribed SBIR funding percentages must be determined annually by computing actual SBIR obligations as a percentage of actual extramural research obligations. While we consider the practice of making up shortfalls in subsequent years to be commendable, it does not technically alter prior year compliance with the subject provision.

ADVANCE COMMENTS FROM THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

DEPARTMENT OF HEALTH & HUMAN SERVICES
Office of Inspector General
Washington D.C. 20201

JUL 29

Mr. Richard L. Fogel
Director, Human Resources
Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Fogel:

Thank you for the opportunity to comment on your draft report, "Implementing the Small Business Innovation Development Act -- The First 2 Years." The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,

Richard P. Kusserow
Inspector General

Enclosure

ADVANCE COMMENTS FROM THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

Comments of the Department of Health and Human Services on the General Accounting Office's (GAO) Draft Report, "Implementing the Small Business Innovation Development Act -- The First 2 Years"

General Comments

In general, we concur with the draft report and its findings. The draft report provides comprehensive coverage of the fundamental aspects of the implementation of the Small Business Innovation Research (SBIR) program in the first two years.

GAO Recommendations

GAO recommends that the heads of agencies participating in the SBIR program:

(1) Reassess their respective agencies reports to OMB and SBA for fiscal years 1983 and 1984, make them consistent, and instruct the appropriate officials to take steps to ensure consistency of these reports in the future.

Department Comments

We concur with the recommendation. Procedures will be implemented to improve the coordination of the release of data to OMB, SBA, and the National Science Foundation on total Departmental research and development obligations. In the future, Departmental officials responsible for submitting this data to the National Science Foundation and OMB will be required to provide copies of their data to the Department's SBIR Coordinator, who is responsible for the submittal of the data to the SBA. These procedures will ensure the consistency of these reports in the future.

(2) After reviewing OMB and SBA reports, provide SBA with revised non-SBIR goals data where necessary.

Department Comments

We concur with the recommendation and we will provide SBA with appropriately revised annual reports for fiscal years 1983 and 1984 as soon as possible.

ADVANCE COMMENTS FROM THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

Technical Comments

Now on p. 62.

— Appendix II, Page 76

In Appendix II, the second PHS SBIR Solicitation is rated "2", i.e., meeting less than 50 percent of the requirements for providing proposal preparation instructions. We find this puzzling since PHS' Solicitation Number 2 is almost identical to PHS' Solicitation Number 1 which was rated "1", i.e., meeting more than 50 percent of the requirements. The only differences between the two documents are a few minor information items that were added to, not changed in, PHS' Solicitation Number 2. Thus it is difficult to understand why PHS' Solicitation Number 2 was rated "2" while PHS' Solicitation Number 1 was found by GAO to be more in compliance. For this reason we question the advisability of including this rating in the report.

ADVANCE COMMENTS FROM THE DEPARTMENT OF THE INTERIOR

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

AUG 2 [illegible]

Mr. J. Dexter Peach
Director, Resources, Community and
Economic Development Division
U. S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for your letter of June 26, 1985, addressed to The Honorable Donald P. Hodel, Secretary of the U.S. Department of the Interior, requesting our comments on the draft report "Implementing the Small Business Innovation Development Act—The First 2 Years." The SBIR staff has reviewed your draft report and they concur with all aspects. However, in their review, two editorial changes are suggested.

Now on p. iv. 1. Page iv, paragraph 3, line 4 - "SBIR" is transposed.

Now on p. 49. 2. Starting on page 57, the footnotes do not coincide.

We appreciate the opportunity to review this report.

Sincerely,

Wayne N Marchant

Acting Assistant Secretary
for Water and Science

ADVANCE COMMENTS FROM THE DEPARTMENT OF TRANSPORTATION

U.S. Department of Transportation

Assistant Secretary
for Administration

400 Seventh St. S.W.
Washington, D.C. 20590

Mr. J. Dexter Peach
Director
Resources, Community and Economic
  Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Enclosed are two copies of the Department of Transportation's comments concerning the U.S. General Accounting Office draft report entitled "Implementing the Small Business Innovation Development Act--The First 2 Years."

Thank you for the opportunity to review this report. If you have any questions concerning our reply, please call Bruce Barkley of my staff on 426-4747.

Sincerely,

Jon H. Seymour

Jon H. Seymour
Acting

Enclosures

ADVANCE COMMENTS FROM THE DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF TRANSPORTATION STATEMENT ON GAO REPORT

I. TITLE: Implementing the Small Business Innovation Development Act - The First Two years (Draft) GAO/RCED - 85-123.

II. SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS:

The GAO found that some agencies with SBIR programs (including DOT) reported estimated amounts rather than actual obligations to the SBA. They recommended that actual obligations be reported.

The GAO found that DOT was not including prior year R&D appropriations in annual extramural funding data to SBA. They recommended that, beginning in fiscal year 1985. the Secretary include all R&D obligations, regardless of the year during which the funds were appropriated when reporting annual extramural R&D funding data to SBA for purposes of the Small Business Innovation Development Act of 1982.

III. SUMMARY OF DEPARTMENT OF TRANSPORTATION POSITION:

DOT agrees with the recommendations.

IV. STATUS OF CORRECTIVE ACTION:

Action has been taken to implement the recommendations.

ADVANCE COMMENTS FROM THE ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
POLICY, PLANNING AND EVALUATION

JUL 26 [illegible]

Mr. J. Dexter Peach
Director
Resources, Community, and Economic
  Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

On June 26, 1985, the General Accounting Office (GAO) issued to the Environmental Protection Agency (EPA) a draft report, "Implementing The Small Business Innovation Development Act--The First Two Years" (GAO/RCED-85-123). According to Public Law 96-226, EPA has reviewed the report and has prepared the following statement.

EPA believes that the report, as it pertains to the Agency, is accurate. Below are GAO's recommendations addressed to EPA and other affected departments and agencies and EPA's response to the recommendations.

GAO Recommendation

To permit proper determination of compliance with the funding provisions of the Small Business Innovation Development Act of 1982, GAO recommends that the heads of appropriate agencies with Small Business Innovation Research (SBIR) programs report actual fiscal year extramural research and development obligations (not estimates) to the Small Business Administration (SBA).

EPA Response

EPA agrees with the recommendation, and intends to report actual research and development obligations for each fiscal year to SBA. These reports will be issued by December 1 following the close of a fiscal year.

GAO Recommendation

GAO recommends that the heads of applicable agencies subject to the non-SBIR goals provisions of the Small Business Innovation Development Act of 1982:

ADVANCE COMMENTS FROM THE ENVIRONMENTAL PROTECTION AGENCY

--Reassess their respective agencies reports to the Office of Management and Budget (OMB) and SBA for fiscal years 1983 and 1984, make them consistent and instruct the appropriate officials to take steps to ensure consistency of these reports in the future.

--After reviewing OMB and SBA reports, provide SBA with revised non-SBIR goals data where necessary.

--Instruct the appropriate officials in their respective agencies to establish goals early in the fiscal year and make such goals known to officials responsible for awarding external research and development funds.

EPA Response

The Agency agrees with all three sections of this recommendation. EPA will carry out the first part of the recommendation by continuing to make sure that Agency reports to OMB and SBA are consistent and that the appropriate officials are informed of this need for consistency. As for the second part, EPA will continue to provide SBA with revised non-SBIR goals as necessary. To implement the third part of the recommendation, the Office of Small and Disadvantaged Business Utilization, in accordance with Public Law 97-219, will issue letters explaining established goals for the non-SBIR program. These letters will be addressed to program Assistant and Associate Administrators and will be issued early in the new fiscal year.

We appreciate the opportunity to comment on the draft report.

Sincerely yours,

John Campbell /for

Milton Russell
Assistant Administrator
for Policy, Planning and Evaluation

ADVANCE COMMENTS FROM THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

NASA
National Aeronautics and
Space Administration
Washington, D.C.
20546

Reply to Attn of: NSM-23

JUL 25 1985

Mr. Frank C. Conahan
Director
National Security and International
Affairs Division
United States General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

Thank you for the opportunity to comment on the GAO draft report entitled "Implementing the Small Business Innovation Development Act -- the First 2 Years."

NASA is in agreement with the draft report's findings and recommendations. However, there are several aspects of the draft report to which NASA is offering comments. Specific Agency comments are provided in the enclosure to the letter.

Sincerely,

C. Robert Nysmith

C. Robert Nysmith
Associate Administrator
for Management

Enclosure

ADVANCE COMMENTS FROM THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA Comments on GAO Draft Report Entitled "Implementing the Small Business Innovation Development Act -- The First 2 Years"

NASA has reviewed, and is in general agreement with, GAO's findings and recommendations set forth in the subject draft report. However, there are several aspects of the draft report to which NASA is offering comments.

GAO recommends that "...heads of applicable agencies instruct the appropriate officials in their respective agencies to establish goals early in the fiscal year and make such goals known to officials responsible for awarding external R&D funds." NASA expends considerable efforts into establishing, monitoring, and achieving its socioeconomic (non-SBIR) procurement goals. Long before the passage of P.L. 97-219, NASA was striving to increase all awards to small businesses, including R&D awards; thus we were and are continuing to meet the intent of the Act with "in-place" small business programs which function well, and it is therefore unlikely that compliance with the GAO's recommendation would result in a significant change.

Another aspect of the draft report requiring comment is with regard to the issue of compliance with the statutory percentage of extramural R&D budget figures. While the draft report appropriately cites 62 Comp. Gen. 232 (1983) in its discussion of the differing DoD/SBA extramural budget figures, it fails to incorporate the same decision into the discussion of agencies' compliance with SBIR funding provisions. Specifically, the draft report on p. 24 finds that "...4 of 11 participating agencies met or exceeded their mandatory fiscal year 1983 SBIR funding percentages." However, the agencies ability to exceed their SBIR funding appears to be in conflict with the rationale set forth by the Comptroller General in addressing the question of the definition of NASA's research and development budget. In 62 Comp. Gen. 232 (1983) the Comptroller General finds that "...calculation of the set-aside on the basis of the entire NASA R&D appropriation would thus result in a proportionately higher percentage than is permitted by the last proviso of Section 4(f)(1) of the Act." It is recommended that the GAO reassess its findings relative to exeeding SBIR funding percentages in light of its previous interpretation of the Act.

Now on p. 20.

See comment 1.

S. J. Evans
Assistant Administrator
for Procurement

ADVANCE COMMENTS FROM THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The following are GAO's comments on the National Aeronautics and Space Administration's letter dated July 25, 1985.

GAO COMMENTS

1. NASA has misinterpreted the quoted segment of 62 Comp. Gen. 232 (1983). It is our position that the SBIR percentages prescribed by the act are required minimums and that nothing in the act places an upper limit on the total amount that an agency may elect to spend under its SBIR program. In our view, such a limitation would be contrary to the act's objective of assisting small businesses in obtaining a larger share of federal research funds. The proviso of the act referred to in 62 Comp. Gen. 232 (1983) places an upper limit on the percentage of an agency's extramural budget for basic research that can be used in satisfying the required SBIR percentage. For example, if the prescribed SBIR requirement for the year is 1 percent, then an agency cannot use more than 1 percent of its extramural budget for basic research to fund SBIR projects needed to meet the statutory minimum. Since the proviso relates solely to meeting the required SBIR minimum percentage, it does not prohibit SBIR awards in excess of the minimum requirement should an agency elect to do so. Basic research is distinguished from other types of R&D in that it is undertaken without specific applications toward processes or products in mind. Applied research, on the other hand, seeks means for meeting a recognized need, while development seeks to use knowledge gained through research to produce useful materials, devices, systems, or methods. As explained by the Chairman, Subcommittee on General Oversight, House Committee on Small Business (128 Congressional Record H3600, daily ed. June 17, 1982), the proviso was added to recognize concerns of the universities and basic research communities that the act not harm the nation's basic research efforts. The intent thus appears to have been to preclude agencies from meeting a disproportionate share of their SBIR requirements with basic research funds.

ADVANCE COMMENTS FROM THE NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE FOUNDATION
WASHINGTON D.C. 20550
Division of Audit & Oversight

July 26, 1985

Mr. J. Dexter Peach
Director
Resources, Community, and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for the opportunity to comment on the Draft GAO Report, "Implementing the Small Business Innovation Development Act--The First 2 Years," GAO/RCED-85-123. We are pleased that this initial report assessing the individual agencies' implementation efforts reflects quite satisfactorily on the National Science Foundation's overall performance in meeting the requirements and intent of Public Law 97-219.

The National Science Foundation agrees with the GAO opinion that the definitions of research and development and extramural budget are the same for reporting to SBA and to Federal Funds. Since, the timing of these reporting requirements are different, generally two to three months apart, the figures reported in December to the SBA represent the best possible estimates for actual extramural obligations based on the information available at that time. We are aware that NSF's figures, due in March to Federal Funds, have shown minor differences when compared with those reported to SBA in December, but the NSF March submission is based on final calculations. It should be noted that although agencies are requested to submit data by March, many have difficulty meeting this deadline--in some cases data are not received until June. As pointed out in your report, a change in SBA's reporting date and policy directive would be required in order for agencies to use the amounts reported in the Federal Funds data submission.

We wish to point out that the Federal Funds survey data are collected and reported for statistical purposes only and serve as the Foundation's response to NSF's legislative mandate which requires that the Foundation monitor national science and technology activities. We make every effort to assure that agency reporting practices are consistent from year to year and that information provided to NSF is as accurate as possible. We know of no reason for agencies not to use this data series as a basis for their reports to SBA, modified as necessary, to account for non-SBIR activities.

Now on p. 16.

The Foundation does object, however, to the wording of the last column heading on page 20 of the report which appears to imply that NSF has some responsibility for determining other agencies'

ADVANCE COMMENTS FROM THE NATIONAL SCIENCE FOUNDATION

SBIR allocations, which is totally inaccurate. We request that the wording be changed to clarify the source of data used for these comparisons.

With respect to reporting agency non-SBIR budget information, NSF reports to SBA in accordance with the SBA Policy Directive that requires agencies to report their non-SBIR activities based on "total R, R&D budget authority," which NSF interprets as including total dollars for Research and Related Activities, including Program Development and Management (the Foundation's administrative expenses), and the U.S. Antarctic Program support costs. Included in these data are the estimates for R&D facilities. The information reported to OMB for inclusion in the President's Budget, referred to in the report, lists separately the R&D facilities data. Since the non-SBIR report to SBA must be generated in early December, at least a month before the submission to OMB is available, our figures are based on available NSF budget documents.

If agency reporting requirements for non-SBIR activities are to be based on information submitted to OMB for Special Analysis K, "Conduct of R&D," SBA should change the reporting deadline to coincide with the OMB submission and revise the Policy Directive accordingly. NSF has been consistent with its method of calculating and reporting both SBIR and non-SBIR activities and is of the opinion that any changes in these methods should be the result of revised implementing instructions to ensure that the agency's level of performance is reflected as accurately as possible.

NSF has mentioned previously to both SBA and GAO that it would be more meaningful, appropriate, and helpful to the agencies, especially with respect to monitoring, if the SBIR and non-SBIR requirements were calculated on the same external R, R&D obligations base. Since the report indicates that a couple of the agencies have used the same base figures for all SBA reporting requirements, we suggest that GAO consider including such a recommendation in its final report to Congress.

NSF strongly supports the GAO recommendation that the SBA reporting date be moved to March.

Sincerely yours,

JHFregeau

Jerome H. Fregeau
Director
Division of Audit and Oversight

ADVANCE COMMENTS FROM THE NUCLEAR REGULATORY COMMISSION

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 31 1985

Mr. J. Dexter Peach, Director
Resources, Community and
  Economic Development Division
U.S. General Accounting Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Peach:

We appreciate the opportunity to review and comment on the draft GAO report "Implementing the Small Business Innovation Development Act--The First 2 Years." The NRC will take the action necessary to implement the GAO "recommendations to heads of agencies" contained in both Chapters 2 and 3 of the report.

Sincerely,

William J. Dircks
Executive Director for Operations

ADVANCE COMMENTS FROM THE

DEPARTMENT OF JUSTICE

U.S. Department of Justice

Washington, D.C. 20530

AUG 8 1985

Mr. William J. Anderson
Director
General Government Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

This letter responds to your request to the Attorney General for the comments of the Department of Justice (Department) on your draft report entitled "Implementing the Small Business Innovation Development Act -- the First 2 Years."

The report covers the fundamental implementation efforts of federal agencies in establishing Small Business Innovation Research (SBIR) procurement programs and complying with the act's funding requirements for fiscal years 1983 and 1984 -- the first 2 years during which the act has been in effect. Chapter 3 of the report provides GAO's assessment of the extent to which agencies have complied with legislative and Small Business Administration (SBA) policy requirements for establishing and reporting information on non-SBIR procurement programs. Since the Department has an annual research and development (R&D) budget exceeding $20 million, it is required to establish specific, annual goals for non-SBIR R&D funding agreements with small businesses and report data on such goals to SBA.

GAO offers three recommendations to agencies in order to adhere to the act's requirements and assure that the goals data reported to SBA and the Office of Management and Budget (OMB) are in agreement. The first recommendation suggests that heads of agencies "reassess their respective agencies' reports to OMB and SBA for fiscal years 1983 and 1984, make them consistent, and instruct the appropriate officials to take steps to ensure consistency of these reports in the future." The Department does not concur with GAO's recommendation because the SBA and OMB definitions of R&D are incompatible and will never permit consistency in reporting. Apparently, GAO perceives that SBA and OMB report guidelines include the same definition of R&D, and that agencies use this definition in developing R&D budget data reports for submission to both SBA and OMB. This is not true.

ADVANCE COMMENTS FROM THE
DEPARTMENT OF JUSTICE

- 2 -

The Annual Report Format developed by SBA and distributed to agencies for use in reporting small business R&D goaling program data defines the amounts to be reported as "R&R&D Obligations [which] include extramural plus intramural funds" (See Note 2 of Appendix I). Section 44.2 in Transmittal Memorandum No. 56 of OMB Circular No. A-11, Revised, dated June 25, 1985, also defines the amounts to be reported to OMB as including extramural plus intramural funds, but contains an additional proviso that "Research and development excludes routine product testing, quality control, mapping, collection of general purpose statistics, experimental production, routine monitoring and evaluation of an operational program, and the training of scientific and technical personnel" (See Appendix II). No such proviso is included in SBA's definition of R&D. The Department's R&D expenditures include routine monitoring and evaluation of an operational program. The monitoring and evaluation function is performed for the Department by a private contractor and these contract dollars are included in the R&D figures reported to SBA. However, these same contract dollars are excluded from the R&D figures reported to OMB as required by OMB Circular A-11. As long as the Department is required to exclude the cost of monitoring an operational program from the R&D dollars reported to OMB, but required to include such costs in the R&D dollars reported to SBA, there can never be consistency in the amounts reported.

To attain consistency in reporting R&D dollars to SBA and OMB, we suggest that GAO include a recommendation in its report asking SBA and OMB to clarify their definitions of R&D so that the dollars reported to each agency can be consistent. As an alternative, a footnote could be included in each report identifying and explaining the reasons for the difference in the dollars reported.

GAO's second recommendation asks that agencies, after reviewing OMB and SBA reports, provide SBA with revised non-SBIR goals data where necessary. The Department agrees with this recommendation. The Department's Small and Disadvantaged Business Utilization Staff reviewed the reports and found no substantive changes which would require submitting revised non-SBIR goals data to SBA.

As a final recommendation, GAO suggests that agency heads instruct appropriate officials in their respective agencies to establish goals early in the fiscal year and make such goals known to officials responsible for awarding external R&D funds. In responding to this recommendation, we are pleased to note the conclusion reached by GAO that the Department has been meeting the requirements of this recommendation and no corrective action is necessary.

ADVANCE COMMENTS FROM THE DEPARTMENT OF JUSTICE

We appreciate the opportunity to provide comments on the report while in draft form. Should you have any questions concerning our comments, please feel free to contact me.

Sincerely,

W. Lawrence Wallace

W. Lawrence Wallace
Acting Assistant Attorney
General for Administration

Enclosures

ADVANCE COMMENTS FROM THE

DEPARTMENT OF JUSTICE

APPENDIX I

U.S. Small Business Administration
Office of Innovation, Research & Technology
SMALL BUSINESS R&R&D GOALING PROGRAM
Annual Report Format
FY __

Reporting Agency______________________

I. a. Previous Fiscal Year (FY) Total R&R&D Obligations $________

b. 1. Previous FY total Prime R&R&D Dollars Awarded to Small Business (less SBIR Awards) $________

2. Previous FY total Prime R&R&D Dollars Awarded to Minority and Disadvantaged owned Small Business (less SBIR Awards) $________

c. 1. Percent of Previous FY R&R&D Obligations Awarded to Small Business (I. b1 ÷ Ia) ________%

2. Percent of Previous FY R&R&D Obligations Awarded to Minority and Disadvantaged owned Small Business (I. b2 ÷ Ia) ________%

II a. Total R&R&D Obligations for Reported FY ____ $________

b. 1. Total R&R&D Small Business Percent Goal for Reported FY. This goal may not be less than the percent awarded to small business in the previous FY and may not include SBIR awards. ________%

2. R&R&D Small Business Goal in Dollars (IIa x IIb 1) $________

c. 1. Total R&R&D Dollars Awarded to Small Business for Reported FY (Less SBIR Awards) $________

2. Total R&R&D dollars Awarded to Minority and Disadvantaged Small Business concerns. (Less SBIR Awards) $________

d. 1. Percent of Total R&R&D Obligations Awarded to Small Business for Reported FY (IIc 1 ÷ IIa) ________%

2. Percent of Total R&R&D Obligations Awarded to Minority and Disadvantaged Small Business (IIc 2 ÷ IIa) ________%

e. Percent of Goal Achieved for Reported FY (IIc 1 ÷ IIa) ________%

November 30, 1984

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ADVANCE COMMENTS FROM THE DEPARTMENT OF JUSTICE

APPENDIX I

U. S. Small Business Administration
Office of Innovation, Research & Technology
Small Business R&R&D Goaling Program
Annual Report Format
(continued)

III. a. Total number and total dollar value of Prime R&R&D Funding Agreements with Small Business in the following categories for reported FY. (This data should include SBIR and all other Awards over $10,000.)

	Total Number	Total Dollar
1. Contracts		
2. Grants		
3. Cooperative Agreements		

b. Total number and total dollar value of R&R&D Funding Agreement with Other Than Small Business* for the following categories for reported FY.

	Total Number	Total Dollar
1. Contracts		
2. Grants		
3. Cooperative Agreements		

NOTES:

1. Other Than Small Business includes any and all obligations provided to an organization that is not a small business concern as defined in 13 CFR, Part 121, 49 Federal Register 5024, et seq (February 9, 1984).

2. R&R&D Obligations include extramural plus intramural funds.

3. Reporting includes all contracts, grants and cooperative agreements less SBIR awards.

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ADVANCE COMMENTS FROM THE DEPARTMENT OF JUSTICE

APPENDIX II

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. [illegible]

June 25, 1985

CIRCULAR NO. A-11
Revised
Transmittal Memorandum No. 56

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Preparation and Submission of Budget Estimates

Transmitted herewith are instructions pertaining to the 1987 Budget process. All previous Transmittal Memoranda to this Circular are hereby rescinded.

This Circular provides guidance for the preparation and submission of annual budgets and associated materials concerning the budget process for all agencies of the Government. For the 1987 Budget, some technical changes have been made with respect to Federal credit data, including modification of several definitions. Direct loans now include the sale of assets on credit terms and exclude claims payments on loan guarantees where no loan asset is acquired. Direct loans made by the Federal Financing Bank (FFB) and guaranteed by an agency and direct loans made by an agency and sold with a guarantee to the FFB will be presented in separate budget schedules and included in agency budget totals.

These and other significant changes are highlighted in the attached analysis of changes.

David A. Stockman

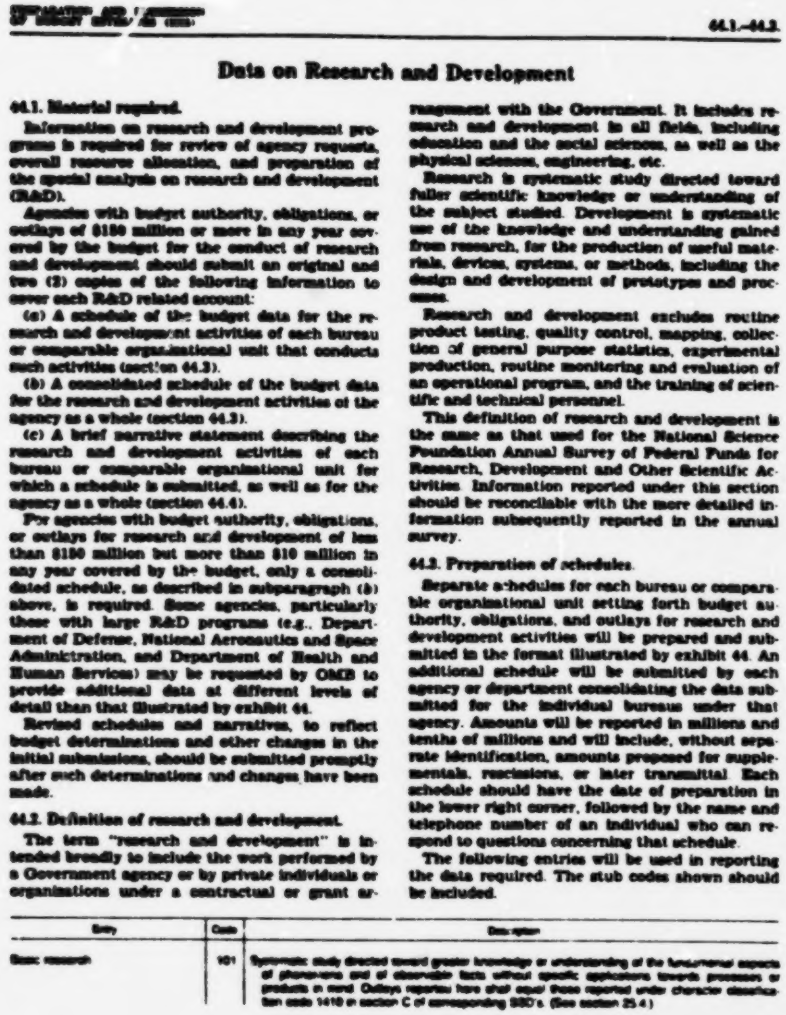
David A. Stockman
Director

Attachment

(No. A-11)

ADVANCE COMMENTS FROM THE DEPARTMENT OF JUSTICE

APPENDIX II



[illegible] 44.1–44.3

Data on Research and Development

44.1. Material required.

Information on research and development programs is required for review of agency requests, overall resource allocation, and preparation of the special analysis on research and development (R&D).

Agencies with budget authority, obligations, or outlays of $100 million or more in any year covered by the budget for the conduct of research and development should submit an original and two (2) copies of the following information to cover each R&D related account:

(*a*) A schedule of the budget data for the research and development activities of each bureau or comparable organizational unit that conducts such activities (section 44.3).

(*b*) A consolidated schedule of the budget data for the research and development activities of the agency as a whole (section 44.3).

(*c*) A brief narrative statement describing the research and development activities of each bureau or comparable organizational unit for which a schedule is submitted, as well as for the agency as a whole (section 44.4).

For agencies with budget authority, obligations, or outlays for research and development of less than $100 million but more than $10 million in any year covered by the budget, only a consolidated schedule, as described in subparagraph (*b*) above, is required. Some agencies, particularly those with large R&D programs (e.g., Department of Defense, National Aeronautics and Space Administration, and Department of Health and Human Services) may be requested by OMB to provide additional data at different levels of detail than that illustrated by exhibit 44.

Revised schedules and narratives, to reflect budget determinations and other changes in the initial submissions, should be submitted promptly after such determinations and changes have been made.

44.2. Definition of research and development.

The term "research and development" is intended broadly to include the work performed by a Government agency or by private individuals or organizations under a contractual or grant arrangement with the Government. It includes research and development in all fields, including education and the social sciences, as well as the physical sciences, engineering, etc.

Research is systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Development is systematic use of the knowledge and understanding gained from research, for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.

Research and development excludes routine product testing, quality control, mapping, collection of general purpose statistics, experimental production, routine monitoring and evaluation of an operational program, and the training of scientific and technical personnel.

This definition of research and development is the same as that used for the National Science Foundation Annual Survey of Federal Funds for Research, Development and Other Scientific Activities. Information reported under this section should be reconcilable with the more detailed information subsequently reported in the annual survey.

44.3. Preparation of schedules.

Separate schedules for each bureau or comparable organizational unit setting forth budget authority, obligations, and outlays for research and development activities will be prepared and submitted in the format illustrated by exhibit 44. An additional schedule will be submitted by each agency or department consolidating the data submitted for the individual bureaus under that agency. Amounts will be reported in millions and tenths of millions and will include, without separate identification, amounts proposed for supplementals, rescissions, or later transmittal. Each schedule should have the date of preparation in the lower right corner, followed by the name and telephone number of an individual who can respond to questions concerning that schedule.

The following entries will be used in reporting the data required. The stub codes shown should be included.

Entry	Code	Description
Basic research	101	Systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Outlays reported here shall equal those reported under character classification code 1410 in section C of corresponding SSD's. (See section 25.4.)

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ADVANCE COMMENTS FROM THE

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

ASSISTANT SECRETARY FOR
POLICY DEVELOPMENT AND RESEARCH

IN REPLY REFER TO

AUG [illegible]

Mr. J. Dexter Peach
Director, Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Peach:

We have read your draft report on the first 2 years of Federal agencies implementation of the Small Business Innovation Development Act of 1982 (Public Law 97-219). It is our understanding from reading this draft report that among other requirements the threshold for establishing a special Small Business Innovative Research (SBIR) program is $100 million annually for extramural research and that in addition to the special SBIR program, the Act requires any Federal agency with an annual R&D budget exceeding $20 million to establish specific annual goals for non-SBIR funding agreements with small businesses.

Now on pp. iii and 41.

PD&R's research appropriation for 1983 was $18 million, and for 1984 was $19.2 million. Since it did not exceed $20 million for fiscal years 1983 or 1984, goals were not established for either of these years. Pages iii and 51 of the draft report should be changed to reflect that information. The report should also be amended to clarify that the phrase ". . . the reporting threshold of a $20 million research budget" means $20 million in annual appropriations rather than $20 million available for obligation including prior year appropriations.

It is our belief that using fiscal year appropriations would provide a consistent benchmark against which goals could be established and real accomplishments could be measured.

See comment 1.

Finally, we support the GAO's recommendation to the Congress ". . . amend the act to specify whether criterion for determining which agencies must establish non-SBIR goals should be applied on a one time or annual basis."

Sincerely,

June Q. Koch, Ph.D.

ADVANCE COMMENTS FROM THE

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

The following are GAO's comments on the Department of Housing and Urban Development's letter dated August 15, 1985.

GAO COMMENTS

1. We interpret the act as requiring that compliance with non-SBIR goals requirements (those governing agencies' participation as well as those governing reporting requirements) be judged ultimately on the basis of an agency's actual total research obligations, not its appropriations as HUD asserts. As our report notes, SBA also uses actual obligation figures to determine which agencies must establish and report on non-SBIR goals. As stated in our report, HUD reported total research obligations for fiscal year 1983 of $22.6 million to OMB for the President's budget. Our report states that HUD's obligations fell below the required minimum in fiscal year 1984. Also, we believe that HUD did "establish goals" in fiscal year 1983 to the extent that it submitted an annual report to SBA which included the required non-SBIR goals data. For fiscal year 1984, however, we point out that HUD did not submit a report and thus did not "establish goals."

ADVANCE COMMENTS FROM THE AGENCY FOR INTERNATIONAL DEVELOPMENT

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D C 20523

ASSISTANT
ADMINISTRATOR

JUL 26 1985

Mr. Frank Conahan
Director
National Security and International
  Affairs Division
General Accounting Office

Dear Mr. Conahan:

Attached are AID's comments on GAO Draft Report No. 005707, "Implementing the Small Business Innovation Development Act -- The First 2 Years."

If you have any questions or would like to discuss these comments, please contact Jim Painter, 632-9110.

Sincerely,

Richard A. Derham
Program and Policy Coordination

enclosure

ADVANCE COMMENTS FROM THE AGENCY FOR INTERNATIONAL DEVELOPMENT

AID's Comments
GAO Draft Report 005707
"Implementing the Small Business Innovation Development Act
-- The First 2 Years"

AID agrees with the conclusions and recommendations included in this report. As GAO notes, there was some internal confusion as to the locus of responsibility for implementation of the requirements of the legislation mandating goal setting and reporting for non-SBIR research activities.

That situation has now been remedied. As a result of the GAO findings and recommendations, AID has clarified the organizational responsbility for establishing goals for non-SBIR research. The agency's Office of Small and Disadvantaged Business (OSDBU) has assumed responsbility for goal setting and reporting requirements under the act.

OSDBU is currently reviewing Fiscal Year 1983 and 1984 data and will be submitting the required reports to SBA shortly. That office also is conducting a review of AID's data collection system to determine if all research or research and development projects are coded properly to ensure accuracy in reporting.

For future reporting, beginning with FY 1985, an SBIR committee has been established within the Agency, under the aegis of OSDBU, to coordinate and clarify SBA reporting requirements and to enhance overall SBIR Program Implementation.

OSBDU also plans to review with SBA the possibility of expanding the agency's SBIR program and intends to pursue outreach and other efforts with SBA to encourage small minority and disadvantaged business in AID research programs and in the SBIR in general.

We believe that these changes will serve to bring the agency into full compliance with the requirements of the legislation.

ADVANCE COMMENTS FROM THE SMITHSONIAN INSTITUTION

SMITHSONIAN INSTITUTION
Washington D.C. 20560
U.S.A.

August 7, 1985

Mr. William J. Anderson
Director, General Government Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

Thank you for your letter of June 26, 1985, giving us the opportunity to read and comment on your draft report on "Implementing the Small Business Innovation Development Act."

The Smithsonian is a unique educational organization that is supported by both private and public funds. Although the Smithsonian is not a "federal agency", as defined by the Small Business Innovation Development Act, it is Institution policy to support such programs if they can be applied to our activities. However, in the case of the non-Small Business Innovation Research (SBIR) procurement programs that are required by act, I do not see a reasonable application to the Smithsonian.

While the Smithsonian's total "R, R & D" budget obligations technically exceed the lower threshhold figure of $20 million set forth by the SBIR program, the Institution's extramural expenditures represent an infinitesimal portion of that amount. (Our research is performed almost entirely in-house, drawing on our extensive museum collections and related materials). For example, a review of all FY 83 prime contracts shows only two contracts, totalling $43 thousand, which even remotely relate to the general thrust of the SBIR policy. (These contracts cover the electronic prospecting for ruins in the Middle East for our Conservation Analytical Laboratory and an archeological survey and excavation in the Amazon region for the National Museum of Natural History). Should these even qualify generically, they represent about 7/100 of 1% of our total obligations, certainly not a viable figure from which to formulate a goal.

I believe that y[illegible]t on the act would serve a useful purpose to organizations such as t[illegible]ian, if you recommend that the Congress reassess the requirements for [illegible] under the act. The need to establish non-SBIR research funding goals [illegible] small businesses should be based on research performed by outside parties (extramural research), rather than annual research funding.

ADVANCE COMMENTS FROM THE SMITHSONIAN INSTITUTION

Nevertheless, we will continue to report our non-SBIR goals to the Small Business Administration as required by the act. We will also assure that future reports on the program to OMB and SBA are consistent.

Sincerely yours,

Dean W Anderson

Dean W. Anderson
Acting Secretary

ADVANCE COMMENTS FROM THE TENNESSEE VALLEY AUTHORITY

TENNESSEE VALLEY AUTHORITY
KNOXVILLE, TENNESSEE 37902

OFFICE OF THE BOARD OF DIRECTORS

AUG 2 1984

Mr. J. Dexter Peach, Director
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for your June 26 letter and the opportunity to review your proposed report on the first two years of Federal agencies' implementation of the Small Business Innovation Development Act of 1982 (Public Law 97-219). We have reviewed the proposed report and have no comments.

We will continue to work diligently for the success and full implementation of the provisions of Public Law 97-219.

Sincerely,

C H Dean Jr

C. H. Dean, Jr.
Chairman

ADVANCE COMMENTS FROM THE VETERANS ADMINISTRATION

Office of the
Administrator
of Veterans Affairs

Washington DC 20420

Veterans
Administration

AUG 12 1985

Mr. Richard L. Fogel
Director, Human Resources Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Fogel:

Your June 26, 1985 draft report "Implementing the Small Business Innovation Development Act — the First 2 Years" has been reviewed. The General Accounting Office (GAO) recommends that I:

- —Instruct appropriate Veterans Administration (VA) officials to establish goals early in the fiscal year and make such goals known to officials responsible for awarding external research and development (R&D) funds.
- —Submit to the Small Business Administration (SBA) data for Fiscal Years 1983 and 1984 regarding non-Small Business Innovation Research (SBIR) goals, in accordance with the requirements contained in the Small Business Innovation Development Act (the Act) of 1982 and SBA's policy directive.

Sections 4(h) and (i) of the Act require all federal agencies which have a "budget for research or research and development in excess of $20,000,000 for any fiscal year beginning with fiscal year 1983 ... (to) establish goals specifically for funding agreements for research or research and development to small business concerns..." (Section h), and to submit an annual report to SBA of its research and development awards in excess of $10,000 (Section i). To date, this Agency's compliance with the Act has been limited because the VA believed it was exempt from the Act, based on a misreading that the $20,000,000 figure referred only to extramural R&D funds. However, the VA did provide figures to the SBA for our 1983 budget.

We will comply with the applicable requirements of the Act in the future, and will furnish R&D budget and procurement information to the SBA as soon as it is available from the Federal Procurement Data Center. Fiscal Year (FY) 1986 small business R&D goals will be furnished in accordance with SBA's timetable.

Our R&D program is essentially an internal one, in which clinician-investigators conduct studies at 129 VA medical centers, supported by the Department of Medicine and Surgery (DM&S). While our FY 1984 research budget exceeded $190 million, the extramural expenditures totaled only $3.2 million, which was obligated with universities, nonprofit institutions, and private sector firms. The extramural expenditures obligated with private sector firms are a very small portion of the total. As we view it, only the expenditures to private sector firms fall within the purview of the Act, as applied to the VA.

ADVANCE COMMENTS FROM THE VETERANS ADMINISTRATION

2.

Mr. Richard L. Fogel

Within DM&S there are no VA extramural solicitations for research other than in the Rehabilitative Research and Development Service (RR&D). That Service contracts for R&D support for special facilities or services for special purposes. Most of these contracts are for support of nonrecurring statistical or technical analyses of a biomedical problem and fabrication of prosthetic devices, usually utilizing the resources of an academic institution. In FY 1981, the most recent year for which individual contract records were readily available, RR&D Service had 35 R&D contracts; 27 of these were with academic institutions. The remaining R&D contracts were divided evenly between not-for-profit and private organizations.

All VA medical research involving patients must be reviewed and approved by a VA medical center's R&D Committee and the Human Studies Subcommittee. This research includes all R&D activities of VA staff, all R&D carried out at VA facilities, all R&D involving VA patients, and all R&D supported by VA resources.

Approximately 80 percent of the 6,000 researchers within the VA are VA staff who are primarily patient care providers; the remainder are nonpatient-care basic scientists on the staffs of VA medical centers. In the course of caring for veteran patients, they frequently encounter problems in the delivery of medical care which require systematic study and, as a result, they generate research proposals. Hence, most VA R&D is investigator-initiated and is not centrally directed, formulated, or conducted. Almost all research within the VA is performed as a responsibility of the local VA medical centers.

There is a small amount of funds obligated annually by the Office of Construction for research and development in the field of building technology. There are no funds specifically appropriated for research and development activities. In FY 1985, less than $500,000 is planned for Office of Construction research and development expenditure.

Sincerely,

Everett Alvarez Jr.

HARRY N. WALTERS Deputy Administrator For
Administrator

(005707)

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